

Service Manual

ORDER NO.
ARP3519

MEDIA RECEIVER

KRP-M01

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
KRP-M01	LFTXJ	AC 110 V to 240 V	
KRP-M01	WAXJ5	AC 220 V to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
KRP-M01	ARP3508	BLOCK DIAGRAM, ADJUSTMENT, etc.

For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.

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1. BASIC ITEMS FOR SERVICE

1.1 QUICK REFERENCE

Quick Reference upon Service Visit ① Notes, PD/SD diagnosis, and methods for various settings

Notes when visiting for service

1. Notes when disassembling/reassembling

① Rear case

When reassembling the rear case, the screws must be tightened in a specific order. Be careful not to tighten them in the wrong order forcibly. For details, see "Rear Case" in "5. DISASSEMBLY".

② Attaching screws for the HDMI and system cable terminals

When attaching the HDMI and system cable terminals after replacing the Assembly, secure the terminals manually with a screwdriver, but not with an electric screwdriver. If you tighten the screws too tightly with an electric screwdriver, the screw heads may be damaged, in which case the screws cannot be untightened/tightened any more.

2. On parts replacement

① How to discharge before replacing the Assys

A charge of significant voltage remains in the Plasma Panel even after the power is turned off. Safely discharge the panel before replacement of parts, in either manner indicated below:

A: Let the panel sit at least for 3 minutes after the power is turned off.
B: Turn the Large Signal System off before the power is turned off then, after 1 minute, turn the power off.

For details, see "5.6 [1] PANEL DRIVE-POWER ON/OFF FUNCTION".

② On the settings after replacement of the Assys

Some boards need settings made after replacement of the Assys. For details, see "8. EACH SETTING AND ADJUSTMENT".

3. On various settings

① Setting in Factory mode

After a Mask indication into the panel is performed, be sure to set the Mask setting to "OFF" then exit Factory mode.

PD		SD		
No. of LEDs flashing	MR	Panel	No. of LEDs flashing	MR
Red 1	MR_POWER	SQ_LSI	Blue 1	
	Panel	Module Device communication	Blue 2	
Red 2	POWER	DIGITAL-RST2	Blue 3	
Red 3	SCAN	Panel temperature	Blue 4	
Red 4	SCN-5V	Audio	Blue 5	Audio (MSP)
Red 6	Y-DCDC	Module microcomputer communication	Blue 6	
Red 7	Y-SUS		Blue 7	Main 3-wire serial communication
Red 8	ADRS		Blue 8	Main IIC communication
Red 10	X-DCDC	Panel main IIC communication	Blue 9	Main microcomputer communication
Red 11	X-SUS		Blue 10	FAN
Red 12	DIG-DCDC	FAN	Blue 11	Unit high temperature
Red 15	UNKNOWN	Unit high temperature	Blue 12	D-TUNER communication
			Blue 13	RST2/RST4
		DC-IN	Blue 15	Main EEPROM
		Panel main EEPROM		

Special LED Patterns		Subcategory confirmation procedure	
Panel	MR	SD	SD Subcategory
PD (2-15)	B R	PD (1)	B R
SD (1-15)	B R	SD (7-15)	B R
System failure	B R	Standalone operation (MRMS01)	B R
MR on standby (Red LED lit)	B R	Rewriting of software (PC)	B R
Rewriting of software (PC)	B R	Rewriting of software (USB)	B R
NO	B R	After rewriting is completed successfully, the orange LED goes dark.	
BACKUP	B R	Rewriting of software failed (USB)	B R
For special patterns other than described here, see 3.1[1].			
Commands for shifting between standalone and system operations			
Panel	MR		
To Standalone operation: SYSS00	To Standalone operation: MRMS01		
To System operation: SYSS01	To System operation: MRMS00		
Note: After issuing a command, unplug then again plug in the AC power cord.			

If the DISPLAY key is pressed during shutdown, the orange LED flashes. (MR only)

Other SD main categories have subcategories. For details, see 3.3 [2].

How to locate several items on the Factory menu

{ } : Item on the Factory menu
[] : Key on the remote control unit
" " : Screen indication

1. Confirmation of accumulated power-on time and power-on count

Select {INFORMATION} then {HOUR METER}.
(After entering Factory mode, press [↓] four times.)

2. Confirmation of the Power-down and Shutdown histories

① Panel system

PD: Select {PANEL FACTORY} then {POWER DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] two times.)

SD: Select {PANEL FACTORY} then {SHUT DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] three times.)

② MR section

Select {INFORMATION} then {MAIN NG}.
(After entering Factory mode, press [↓] three times.)

③ Panel main section

Select {PANEL MAIN FACTORY} then {PM NG INFO}.
After entering Factory mode, press [MUTING] twice, then press [ENTER/SET].

3. How to display the Mask indication

① Mask indication in the panel side

- Select {PANEL FACTORY} then {RASTER MASK SETUP}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] 8 times.)
- Press [ENTER/SET], then select a Mask indication, using [↑] or [↓].

Adjustments and Settings after replacement of the Assys (Procedures in Factory mode)

1. DIGITAL Assy (Panel): Transfer of backup data

- Select {PANEL FACTORY}, {ETC}, then {BACKUP DATA}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [↓] seven times, then press [ENTER/SET].)
- Select {TRANSFER}, using [→], then hold [ENTER/SET] pressed for at least 5 seconds.
- After transfer of backup data is completed, {ETC} is automatically selected, and the LED on the front panel returns to normal lighting.

2. MAIN BLOCK Assy (MR), MAIN Assy (Panel): Execution of FINAL SETUP.

- Select {INITIALIZE} then {FINAL SETUP}, then press [ENTER/SET]. (After entering Factory mode, press [MUTING] four times, then press [↓] once.)
- Select "YES", using [→]. Then hold [ENTER/SET] pressed for at least 5 seconds.
- After "FINAL SETUP IS COMPLETE" is displayed on the screen, turn the POWER switch of the main unit off.

3. POWER SUPPLY Unit (Panel): Clearance of the accumulated power-on count and maximum temperature value

- Select {PANEL FACTORY}, {ETC}, then {P COUNT INFO}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [↓] seven times, press [ENTER/SET], then press [↓] six times.)
- Press [→] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected. Clear the maximum temperature value (MAX TEMP) in the same manner.

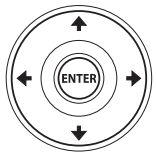
4. Other Assys (Panel): Clearance of the maximum temperature value

- Select {PANEL FACTORY}, {ETC}, then {MAX TEMP}. (After entering Factory mode, press [MUTING] once, press [ENTER], press [↓] seven times, press [ENTER/SET], then press [↓] seven times.)
- Press [→] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected.

Quick Reference upon Service Visit ②

Mode transition and structure of layers in Service Factory mode

Mode transition in Service Factory mode



Up
↓
Down

- To shift to another mode, press [MUTING].
- To shift to another item in a specific mode, press [↑] or [↓].
- To shift to the next nested layer below for an item with a "(+)" indication, press [ENTER/SET]. To return to the next nested layer above, also press [ENTER/SET].

INFORMATION mode

1. VERSION (1)
2. VERSION (2)
3. VERSION (3)
4. MAIN NG
5. TEMPERATURE
6. HOUR METER
7. HDMI SIGNAL INFO 1
8. HDMI SIGNAL INFO 2
9. VDEC SIGNAL INFO 1
10. VDEC SIGNAL INFO 2



INITIALIZE mode

1. SIDE MASK LEVEL
2. FINAL SETUP
3. Wide XGA AUTO
4. AUTO ADJUSTMENT



OPTION mode

1. CH PRESET
2. AFT
3. SYNC DET
4. CTI



PANEL MAIN FACTORY mode

1. PM NG INFO
2. PM STATE INFO
3. DP_RX INFO
4. PM_SETUP

PANEL FACTORY mode

1. PANEL INFORMATION
2. PANEL WORKS
3. POWER DOWN
4. SHUT DOWN
5. PANEL-1 ADJ
6. PANEL-2 ADJ
7. PANEL FUNCTION
8. ETC.
9. RASTER MASK SETUP
10. PATTEN MASK SETUP
11. COMBI MASK SETUP

Structure of Layers in Service Factory Mode

INFORMATION mode

- 1. VERSION (1)
- 2. VERSION (2)
- 3. VERSION (3)
- 4. MAIN NG
 - 4-1. CLEAR
- 5. TEMPERATURE
- 6. HOUR METER
- 7. HDMI SIGNAL INFO 1
- 8. HDMI SIGNAL INFO 2
- 9. VDEC SIGNAL INFO 1
- 10. VDEC SIGNAL INFO 2

The software versions for each microcomputer
The Flash memory versions for each device
The software versions for display microcomputer
The shutdown message ID/event times
(Going Clear mode by [ENTER/SET] key)
Select Yes by [→] key → pushing and hold [ENTER/SET] key
The temperature/FAN rotating status
The HOUR METER/P-COUNT information
The information of HDMI information files
The information of HDMI information files
The signal information of VDEC
The signal information of VDEC

PANEL FACTORY mode

Refer to [PANEL FACTORY MODE]

PANEL MAIN FACTORY mode

- 1. PM NG INFO
- 2. PM STATE INFO
- 3. DP_RX INFO
- 4. PM_SETUP

Shutdown history of the panel main
The temperature/FAN rotating status/Room Light Sensor
Indication of the DPRx ID
Select the bezel color and clear the shutdown history of the panel main

OPTION mode

- 1. CH PRESET
- 2. AFT
- 3. SYNC DET
- 4. CTI

For production line use
For production line use
For technical analysis
For technical analysis

INITIALIZE mode

- 1. SIDE MASK LEVEL
 - 1-1. SIDE MASK LEVEL
- 2. FINAL SETUP
 - 2-1. DATA RESET
- 3. Wide XGA AUTO
- 4. AUTO ADJUSTMENT

For factory use
Set to Factory default settings (it should perform after replacing a MAIN Assy)
For technical analysis

Structure of Layers in Panel Factory Mode 1

1. PANEL INFORMATION
2. PANEL WORKS
3. POWER DOWN
4. SHUT DOWN
5. PANEL-1 ADJ (+)
 1. VOL SUS
 2. VOL OFFSET
 -
10. RESET1ST_KSB
 -
25. SUS FREQ
6. PANEL-2 ADJ (+)
 1. R-HIGH
 2. G-HIGH
 -
 6. B-LOW
 7. ABL
7. PANEL FUNCTION (+)
 1. R-LEVEL
 -

Version indication of the panel
Indications of the accumulated power-on time and power-on count of the panel
Indication of the Power-down history
Indication of the Shutdown history

Settings required after replacement of the panel

Items for factory use

For AM noise prevention (Depending on the mode, brightness of the screen changes.)
For confirmation of the result of the setting change, the unit must be turned off then back on again.

For the WB adjustment of the panel and ABL adjustment.
A setting table is available for each signal frequency.

Items for factory use

To "Structure of Layers in Panel Factory Mode 2"

Structure of Layers in Panel Factory Mode 2

8. ETC (+)
 1. BACKUP DATA
 2. DIGITAL EEPROM
 3. PD INFO
 4. SD INFO
 5. HR-MTR INFO
 6. PM/B1-B5
 7. P COUNT INFO
 8. MAX TEMP
 9. MIRROR
 10. CLS
9. RASTER MASK SETUP (+)
 1. MASK OFF
 2. RST MASK 01
 -
10. PATTERN MASK SETUP (+)
 1. MASK OFF
 2. PTN MASK 01
 -
11. COMBI MASK SETUP (+)
 1. MASK OFF
 2. CMB MASK 01
 -

For transferring backup data (after replacement of the DIGITAL Assy)
Change the adjustment status of the DIGITAL Assy.

For clearance of data for the corresponding items.
The clearing method is the same: Select "CLEAR", then hold [ENTER/SET] pressed for at least 5 seconds.

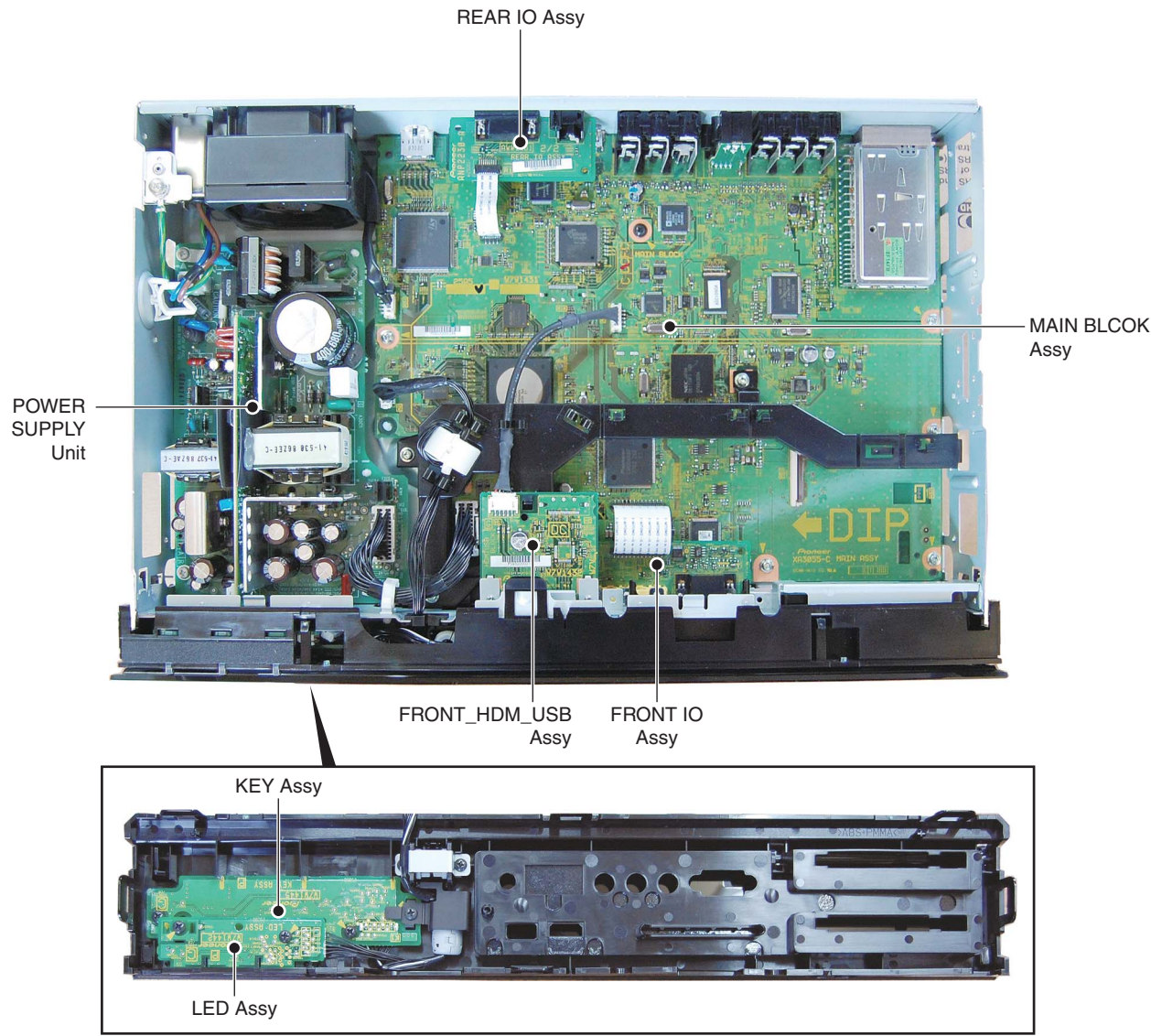
Switch the Mirror display mode.
Switch the function when checking the color sensor level.

For use while the Raster Mask is displayed.
Use [↑] or [↓] to select the type of mask.
Use [→] or [←] to select the sequence.

For use while the Pattern Mask is displayed.
Use [↑] or [↓] to select the type of mask.
Use [→] or [←] to select the sequence.

For use while the Combination Mask is displayed.
Use [↑] or [↓] to select the type of mask.
Use [→] or [←] to select the sequence.

Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.



NOTES: ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
● The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Mark No.	Description	Part No.	Mark No.	Description	Part No.
LIST OF ASSEMBLIES					
NSP	1..MAIN ASSY	AWV2595	NSP	1..FUKUGO ASSY	AWV2596
	2..FRONT_HDM_USB ASSY	AWW1432		2..REAR IO ASSY	AWW1461
	2..MAIN BLOCK ASSY	AWW1431		2..LED ASSY	AWW1442
				2..FRONT IO ASSY	AWW1443
				2..KEY ASSY	AWW1445
			⚠	1..POWER SUPPLY UNIT	AXY1223

1234

2. BLOCK DIAGRAM

2.1 OVERALL WIRING DIAGRAM

A

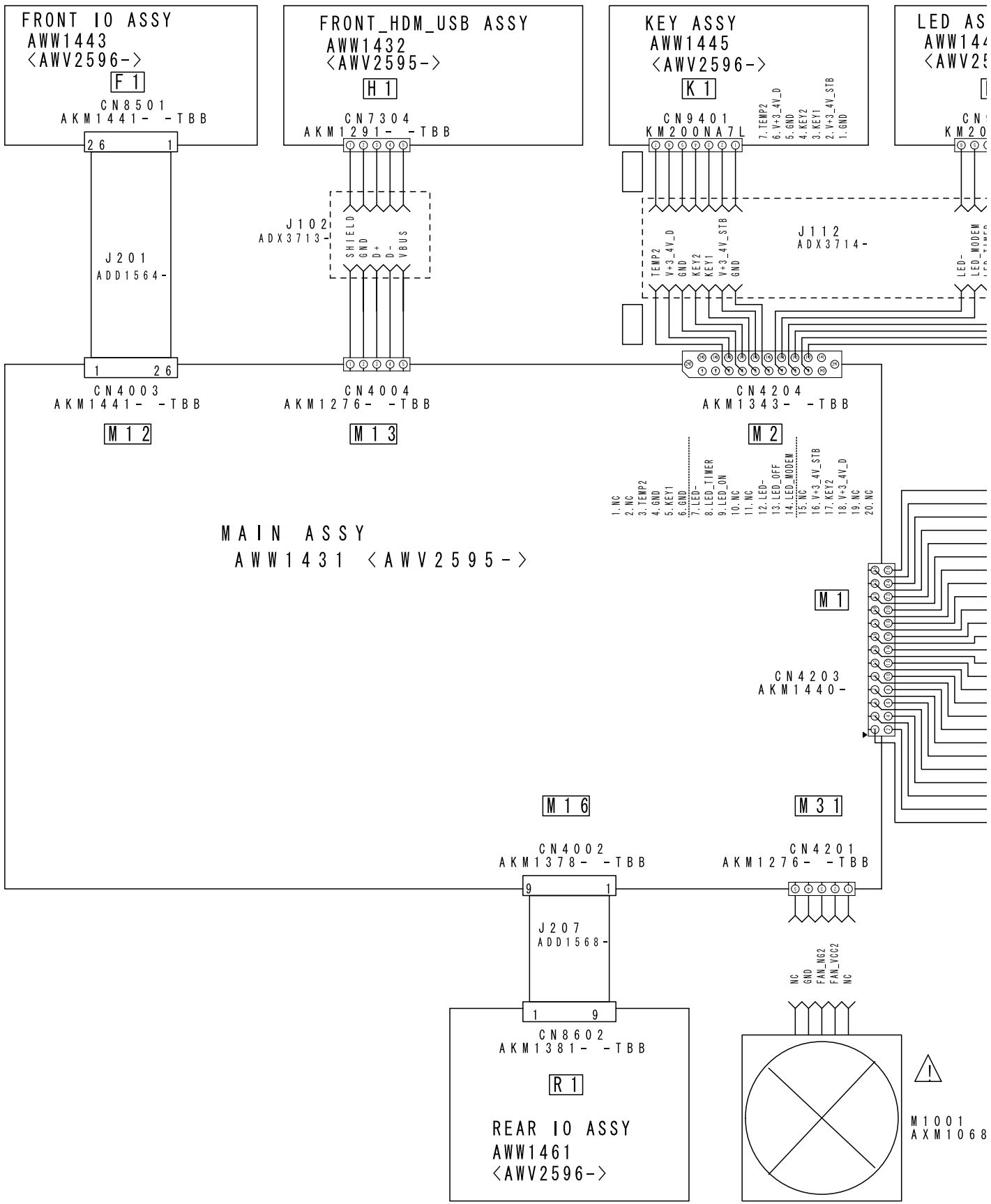
B

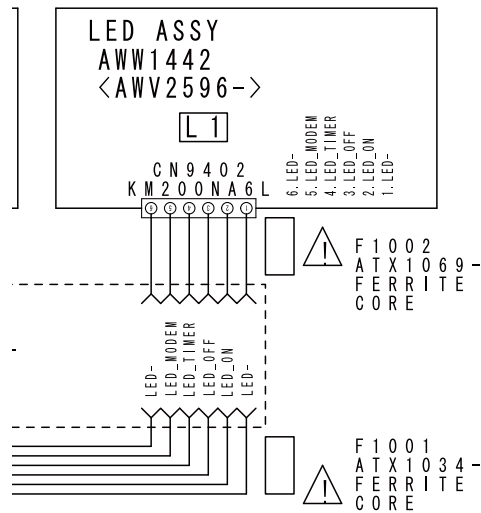
C

D

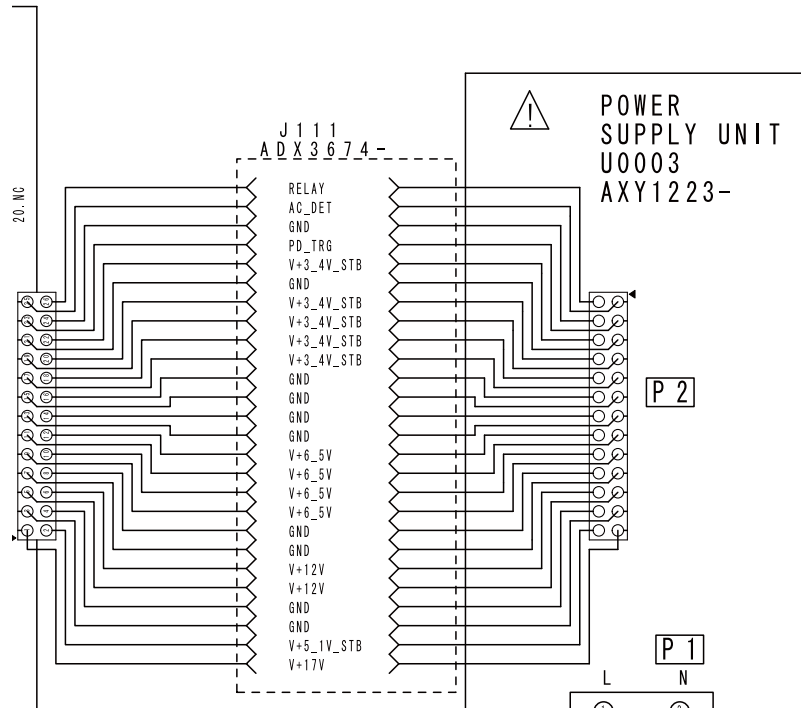
E

F





- When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



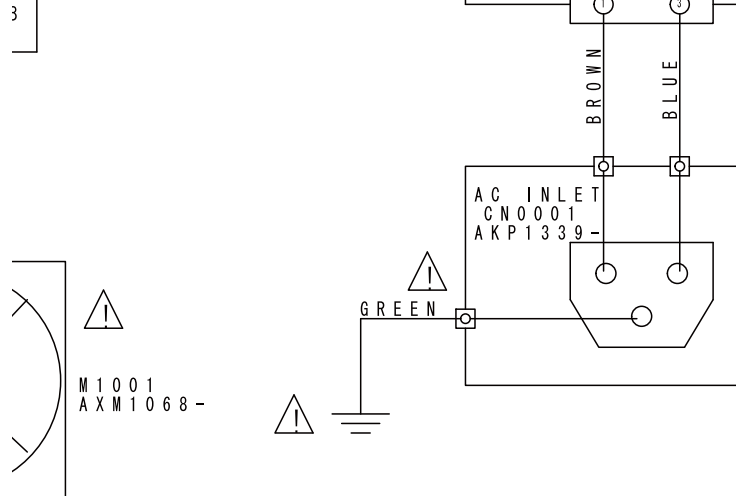
CONNECTOR PIN ASSIGN

CN4003 **M12** → CN8501 **F1**

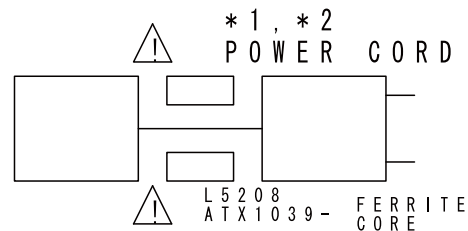
1-26	HP_R	14-13	GND
2-25	GND	15-12	PCB
3-24	HP_L	16-11	GND
4-23	PLUG	17-10	PCB
5-22	GND	18-9	GND
6-21	FRONT_V	19-8	PC_VD
7-20	GND	20-7	GND
8-19	FRONT_L	21-6	GND
9-18	GND	22-5	HP_LED
10-17	GND	23-4	V+5V_IO_FRNT
11-16	FRONT_R	24-3	N.C
12-15	GND	25-2	V+3_4V_STB_FRNT
13-14	PC_R	26-1	

CN4002 **M16** → CN8602 **R1**

1-8	GND
2-7	GND
3-6	CSW00FER
4-5	MD
9-12	CR2
13-16	CR4
17-20	CR8
21-24	GND

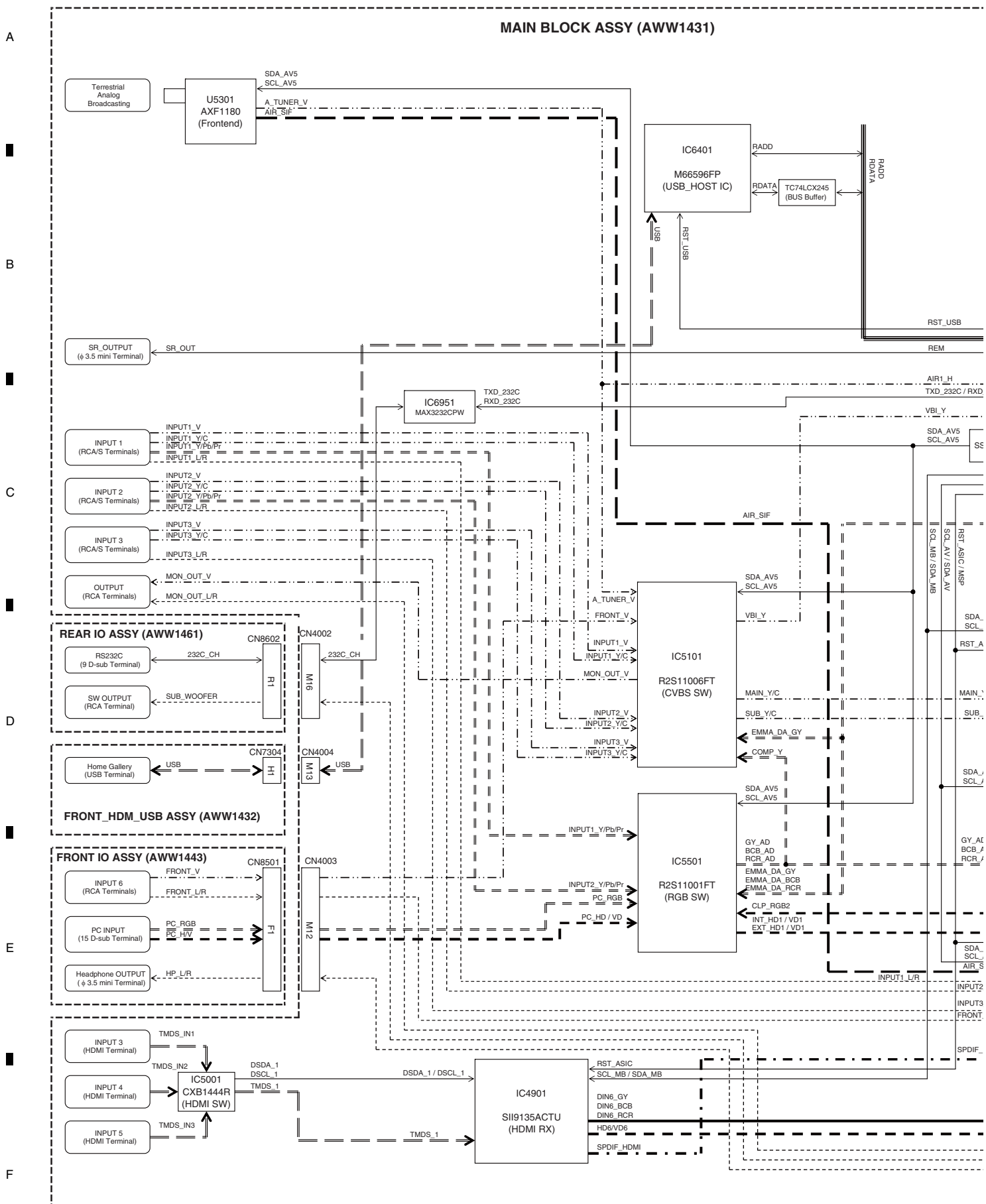


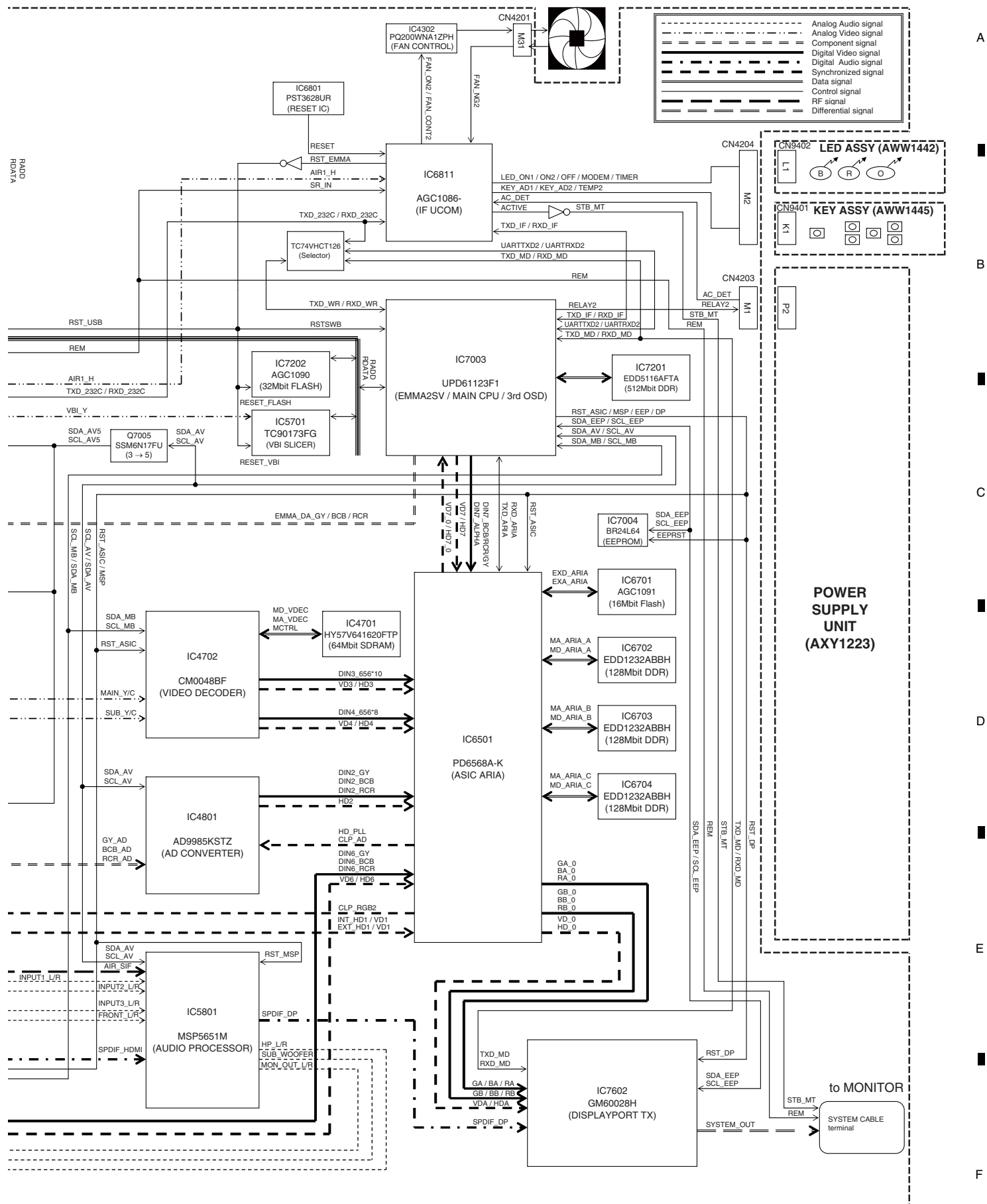
* 1	KRP-M01/WAXJ5	ADG1209-
* 2	KRP-M01/LFTXJ	ADG1239- (FOR TAIWAN) (Other)



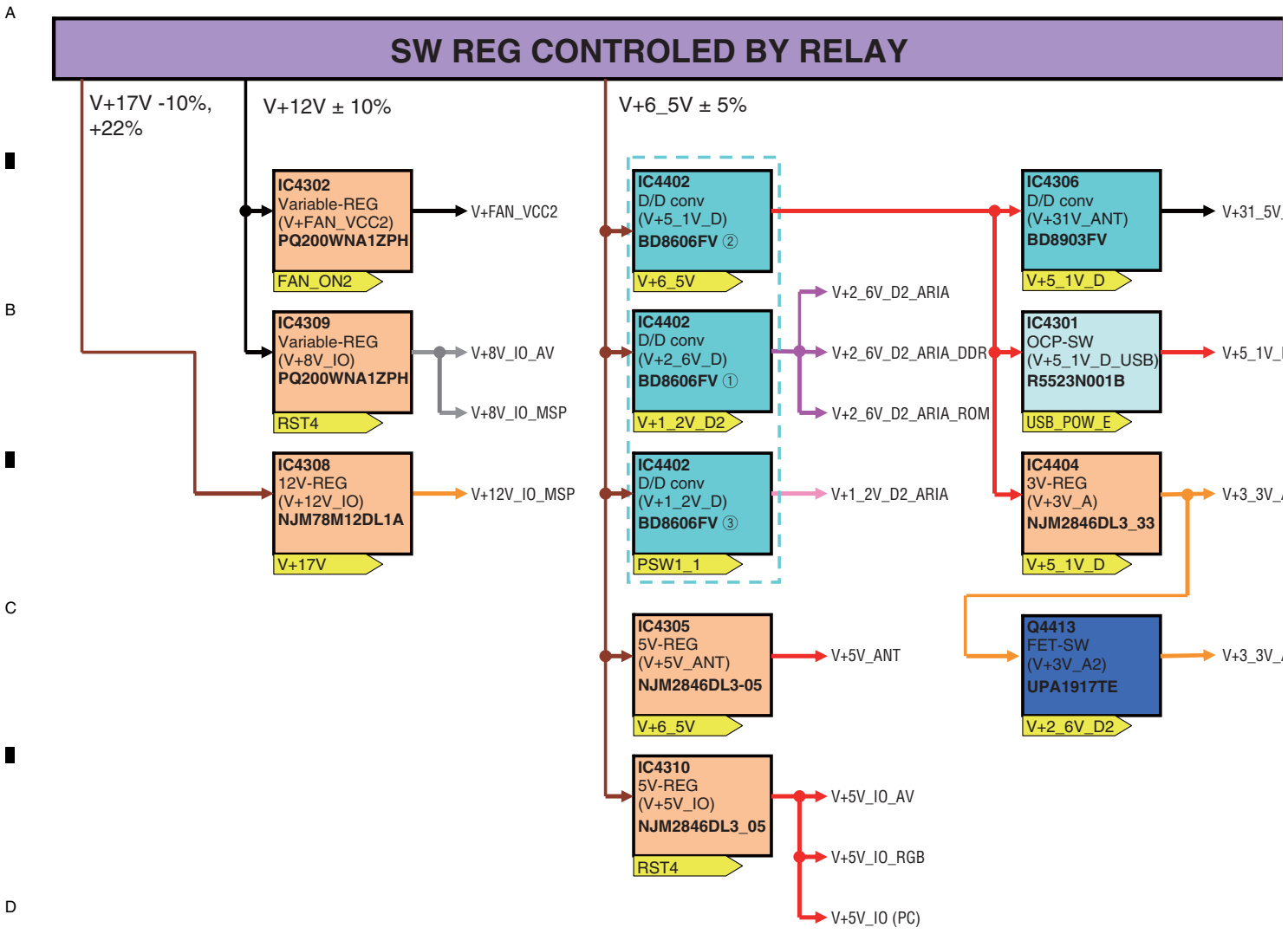
OVERALL DIAGRAM
KRP-M01

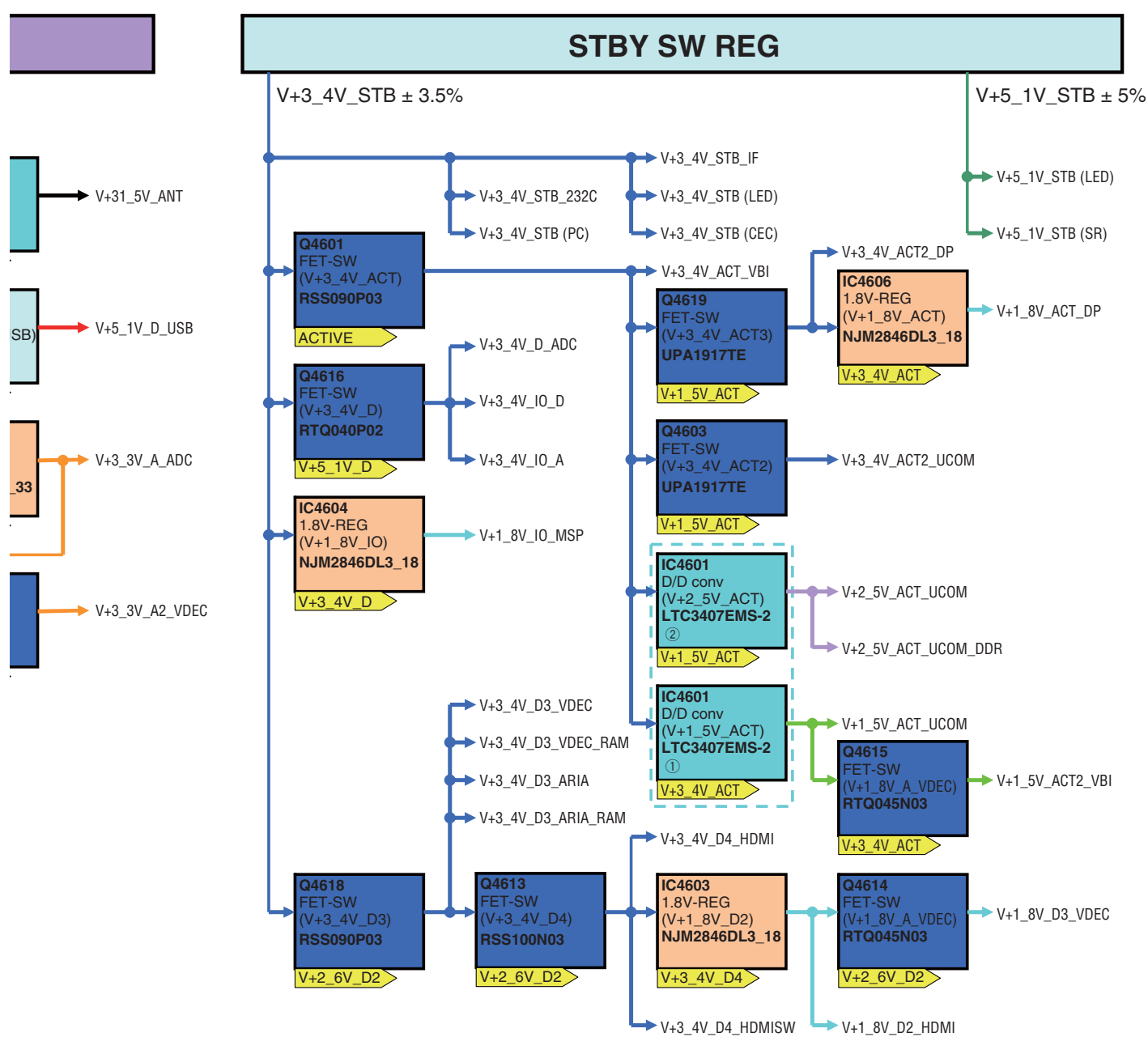
2.2 OVERALL BLOCK DIAGRAM



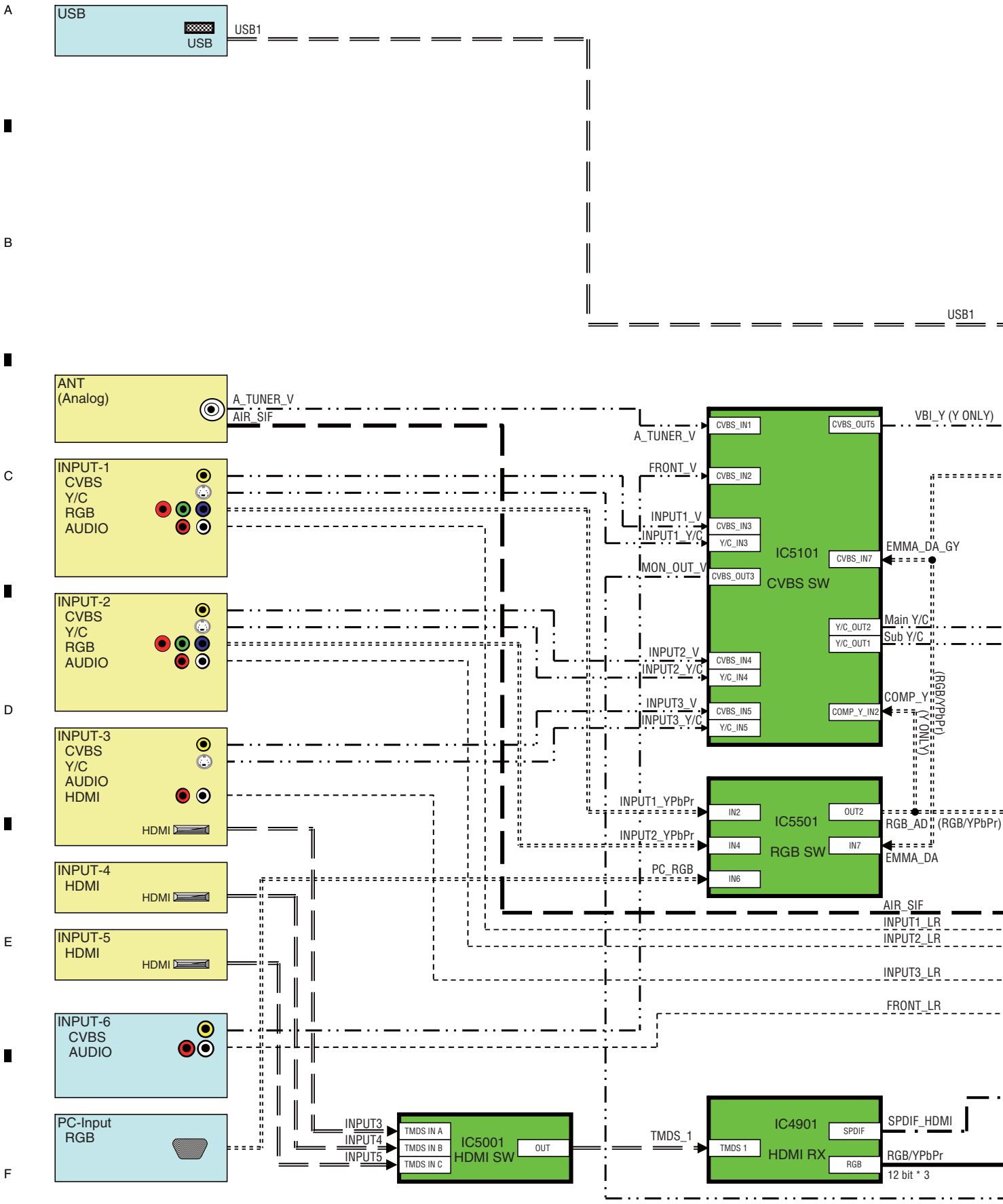
OVERALL DIAGRAM
KRP-M01

2.3 POWER SUPPLY BLOCK of MAIN BLOCK ASSY





2.4 AV BLOCK





A Following item is same as the KRP-M01/WYSIXK5.

OUTLINE OF RS-232C COMMAND

3.1 POWER SUPPLY OPERATION

B Following item is same as the KRP-M01/WYSIXK5.

[2] POWER ON SEQUENCE

C [1] LED DISPLAY INFORMATION

LED Pattern

Status	LED	LED Pattern / Remarks			
Standby Power Management	Blue Red Orange				
Power On	Blue Red Orange				
Power-Down	Blue Red Orange	Once 500ms	Twice	n times 2.5s	Once *1
Shutdown	Blue Red Orange	500ms	Twice	n times 2.5s	Once *2
Shutdown (Subcategory flashing)	Blue Red Orange	500ms	Twice	n times 2.5s	Once *2 *3
No digital adjustment data copied for backup	Blue Red Orange				
Updating the PC	Blue Red Orange				
During factory operation	Blue Red Orange				
Power ON of standalone mode (Screen ON)	Blue Red Orange				
Mode switch of system / standalone operation	Blue Red Orange				
Sleep timer	Blue Red Orange				

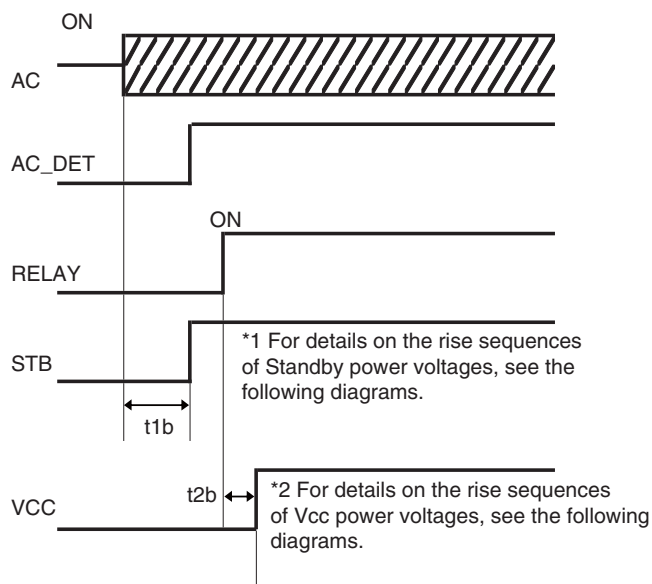


F *1: Notify upon the power-down content by Red LED flashing number of times.
*2: Notify upon the shutdown content by Blue LED flashing number of times.
*3: Notify upon the subcategory number by Orange LED flashing number of times.

[3] DETAILS OF POWER ON SEQUENCE

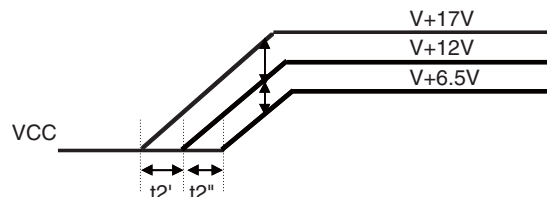
The rise of the output voltage is defined as the point at which 10% output voltage is reached.

1. Sequence of Relay ON (IN)



Relay ON	
Item	Specified Time
AC to STB	$t1b \leq 0.8s$
RELAY to VCC	$t2b \leq 0.5s$

3. Rise sequences of Vcc power voltages



<Specified time of voltages>

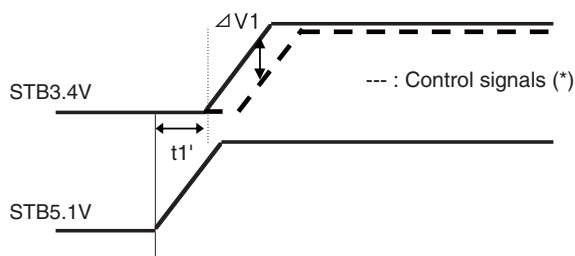
Rise	
Item	Specified time (at nominal load)
V+17V to V+12V	$0ms \leq t2' \leq 10ms$
V+12V to V+6.5V	$0ms \leq t2'' \leq 10ms$

4. Specifications of the rise time of the output voltages (common to all sequences)

Note that there must not be any temporary voltage drop during rising.

Rise time (time required for reaching from 10% to 90% output voltage)	
Item	Specified time
STB 10% to STB 90%	$tr_STB \leq 100ms$
VCC 10% to VCC 90%	$tr_VCC \leq 200ms$

2. Rise sequence of Standby power voltages

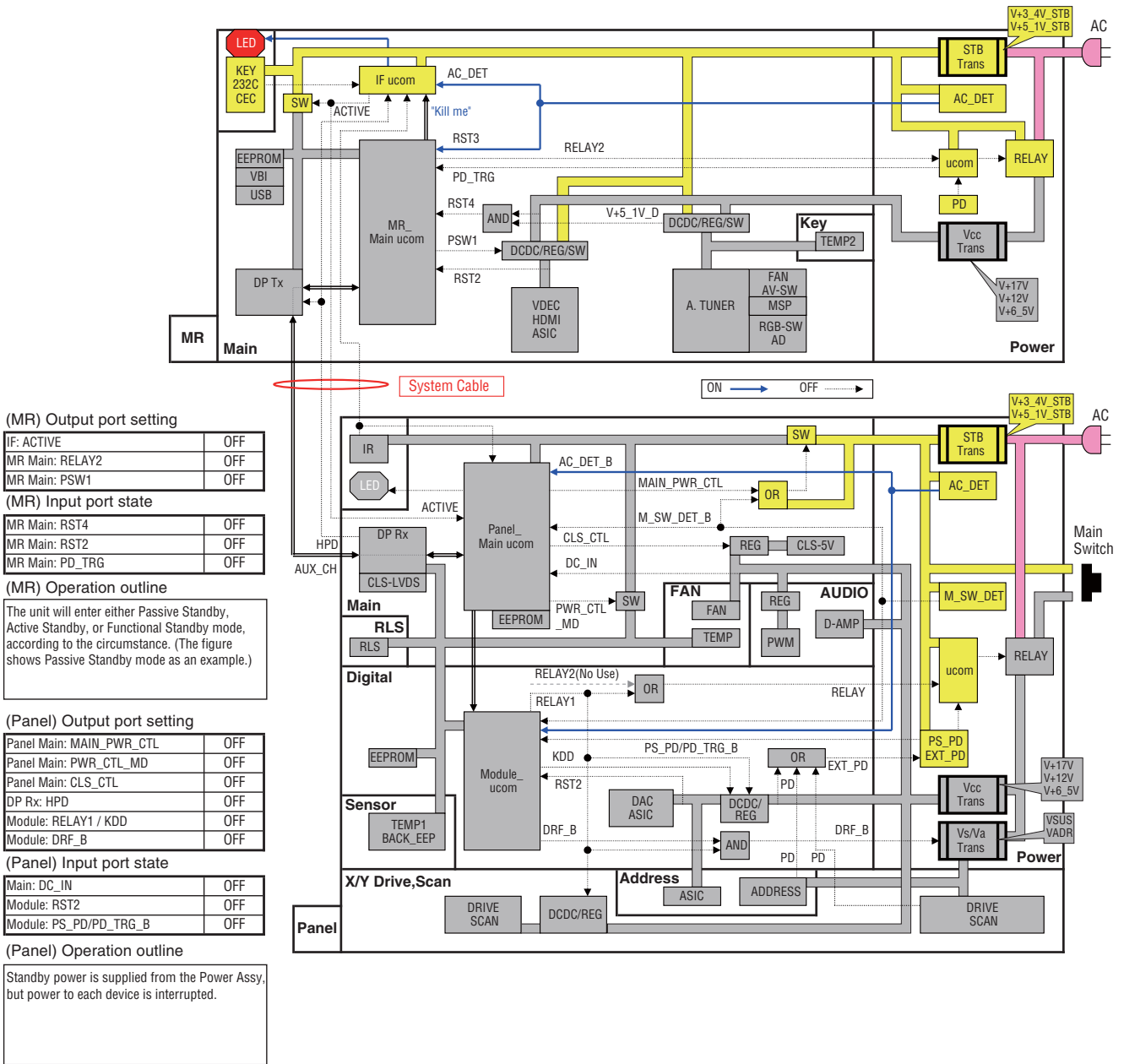


<Specified time and difference of voltages>

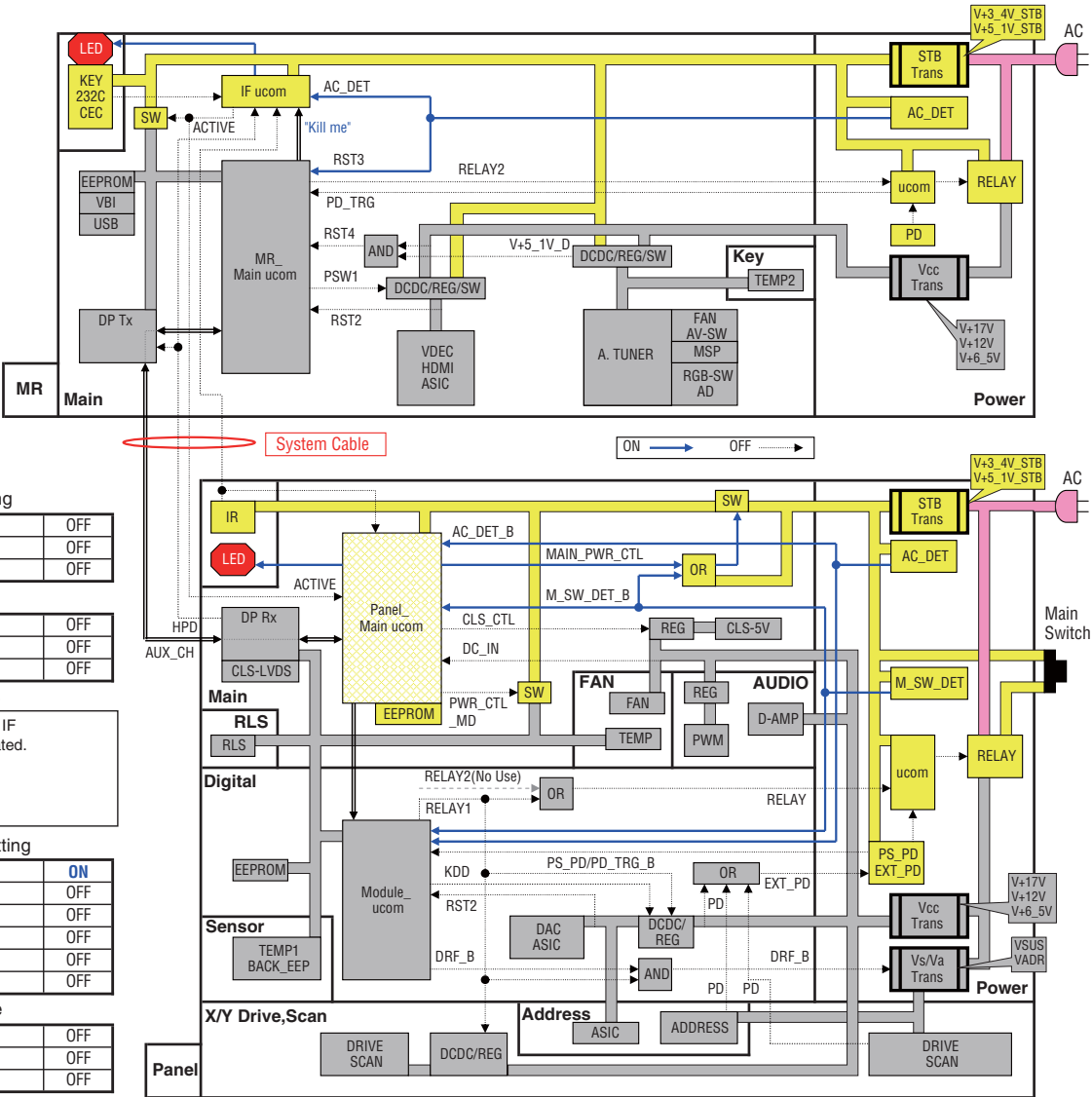
Rise	
Item	Specified Time
STB5.1V to STB3.4V	$-50ms \leq t1' \leq 50ms$
Item	Specified difference of voltages
STB3.4V - Control signal (*)	$0V \leq \Delta V1$

(*) Control signals (output signals) denote AC_DET and PD_TRG signals.

Panel Main Power OFF



Passive Standby



(MR) Output port setting

IF: ACTIVE	OFF
MR Main: RELAY2	OFF
MR Main: PSW1	OFF

(MR) Input port state

MR Main: RST4	OFF
MR Main: RST2	OFF
MR Main: PD_TRG	OFF

(MR) Operation outline

Only the periphery of the IF microcomputer are operated.

(Panel) Output port setting

Panel Main: MAIN_PWR_CTL	ON
Panel Main: PWR_CTL_MD	OFF
Panel Main: CLS_CTL	OFF
DP Rx: HPD	OFF
Module: RELAY1 / KDD	OFF
Module: DRF_B	OFF

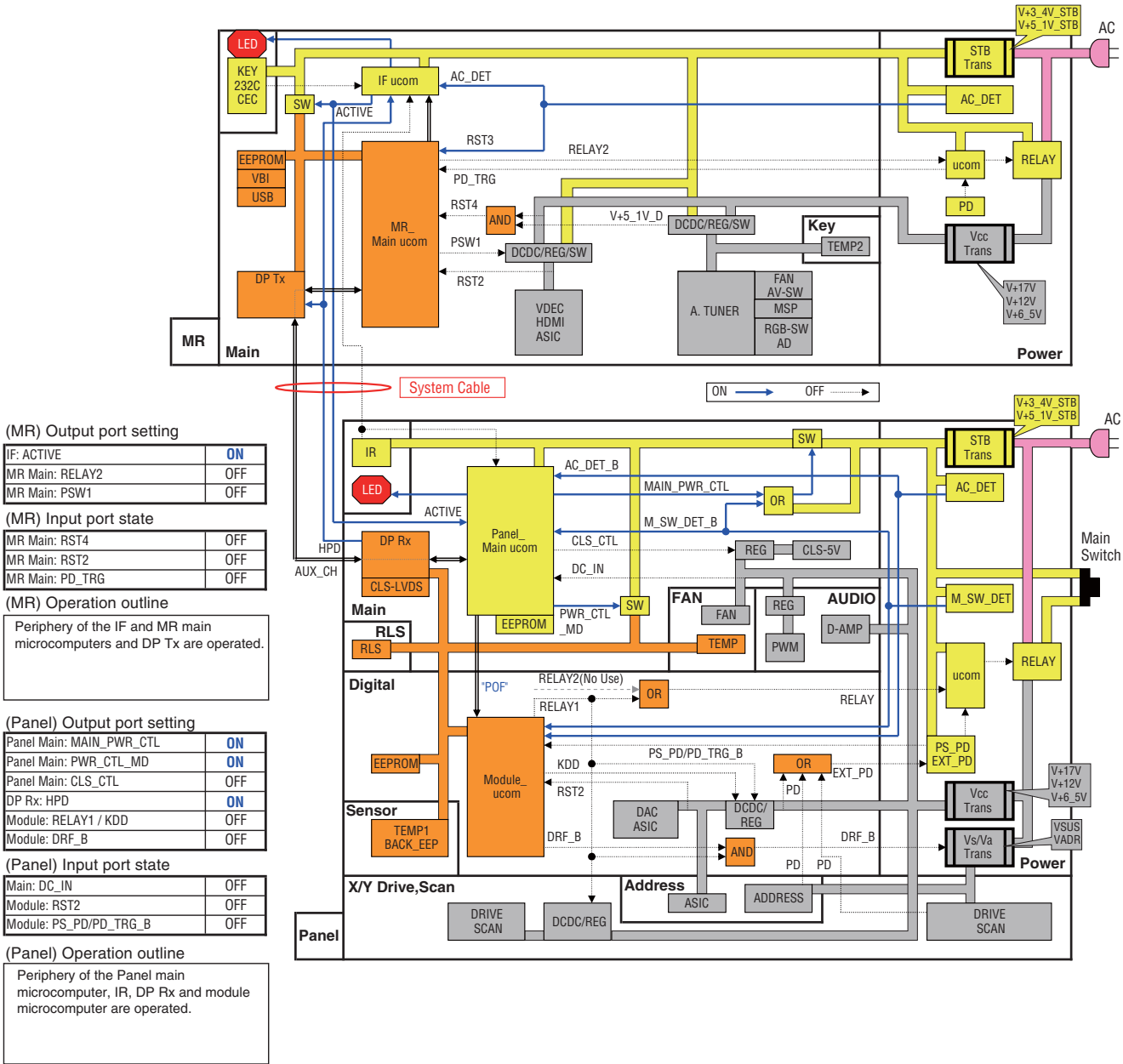
(Panel) Input port state

Main: DC_IN	OFF
Module: RST2	OFF
Module: PS_PD/PD_TRG_B	OFF

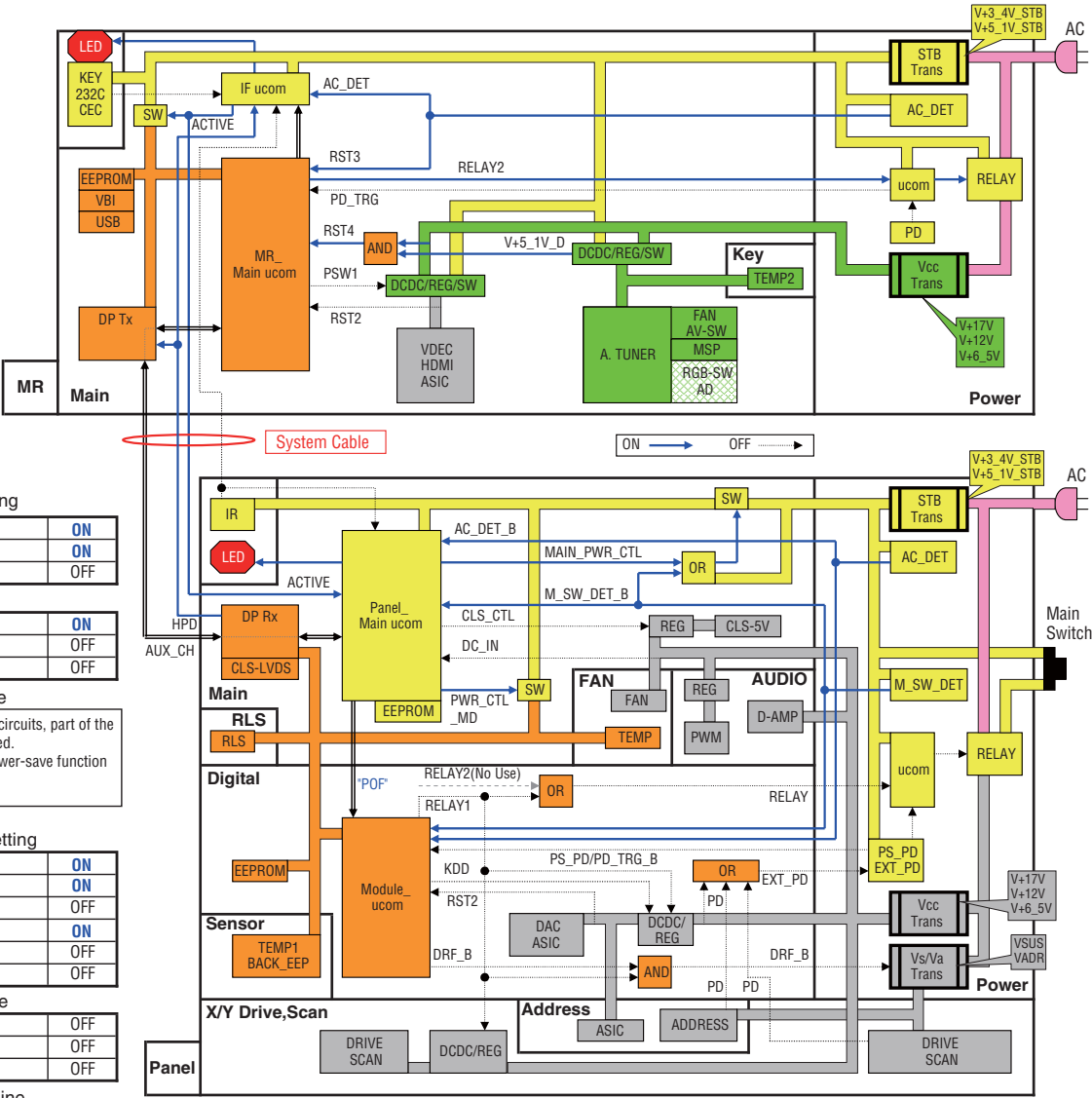
(Panel) Operation outline

Only the periphery of the Panel main microcomputer and IR are operated.
In this time, panel main microcomputer is the sleep mode.

Active Standby



Function Standby



(MR) Output port setting

IF: ACTIVE	ON
MR Main: RELAY2	ON
MR Main: PSW1	OFF

(MR) Input port state

MR Main: RST4	ON
MR Main: RST2	OFF
MR Main: PD_TRG	OFF

(MR) Operation outline

- Besides the standby power circuits, part of the Vcc circuits are also activated.
- RGB-SW/AD IC uses the power-save function of the IC.

(Panel) Output port setting

Panel Main: MAIN_PWR_CTL	ON
Panel Main: PWR_CTL_MD	ON
Panel Main: CLS_CTL	OFF
DP Rx: HPD	ON
Module: RELAY1 / KDD	OFF
Module: DRF_B	OFF

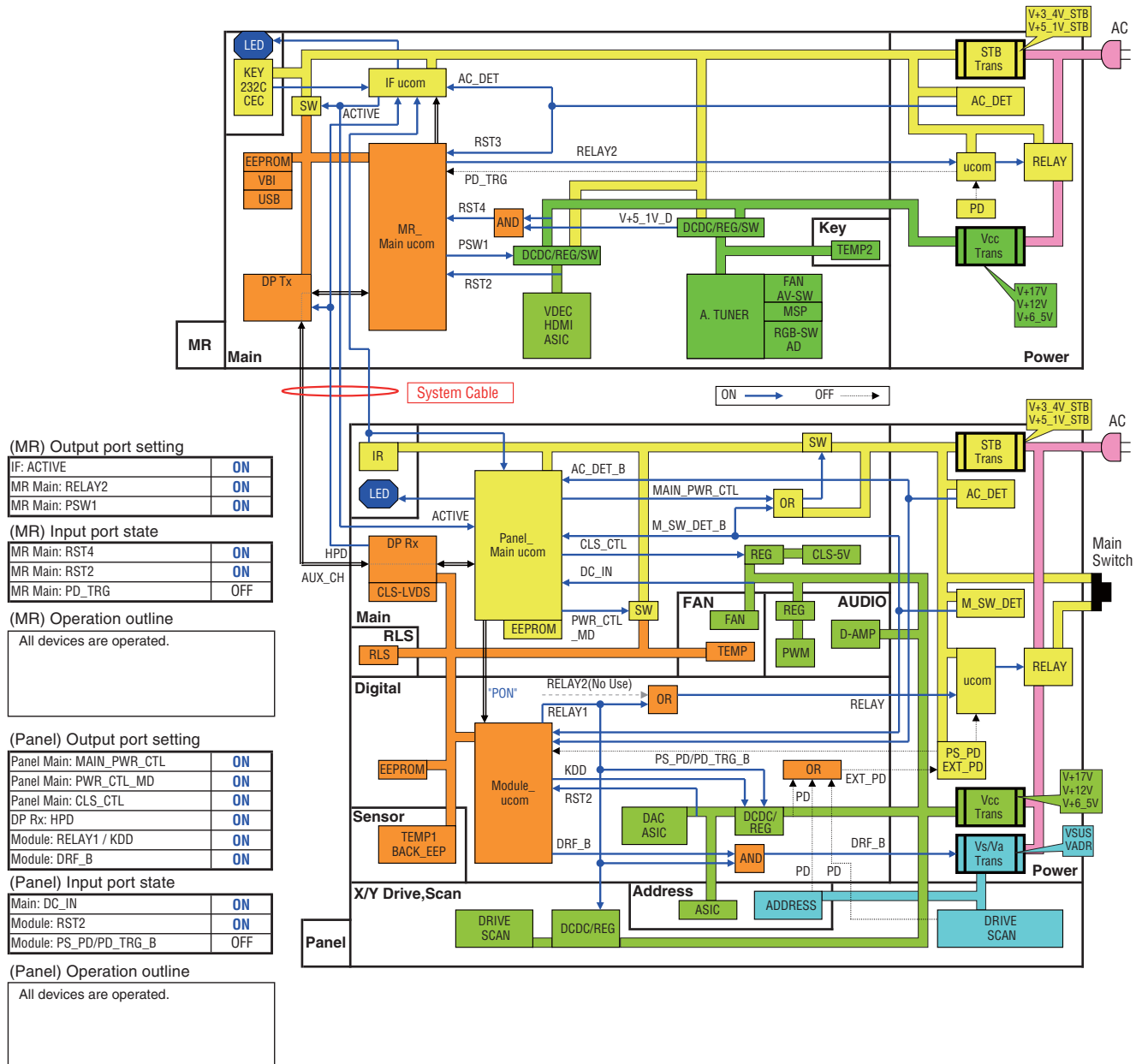
(Panel) Input port state

Main: DC_IN	OFF
Module: RST2	OFF
Module: PS_PD/PD_TRG_B	OFF

(Panel) Operation outline

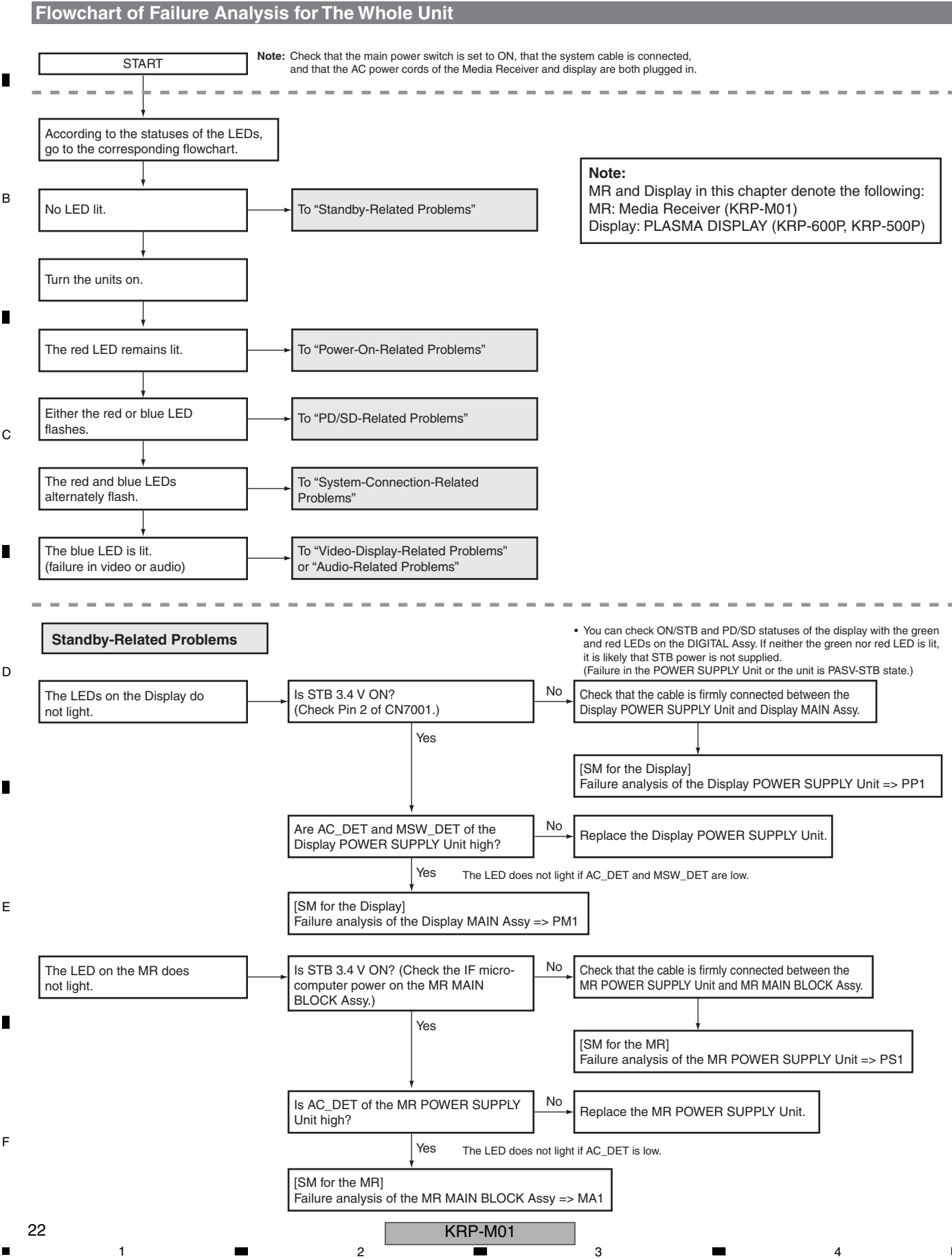
Periphery of the Panel main microcomputer, IR, DP Rx and module microcomputer are operated.
(As same state as the active standby)

PDP Screen ON

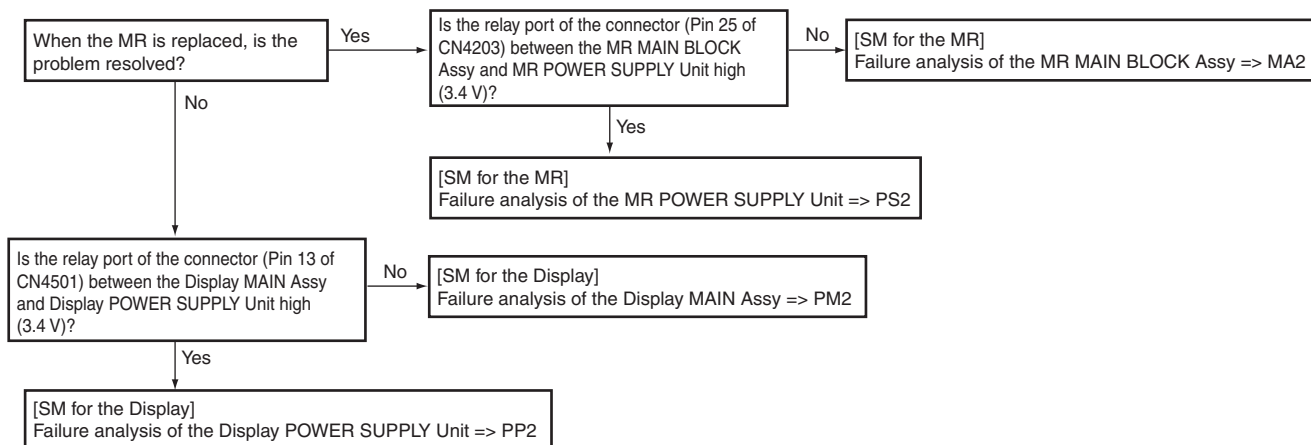


A

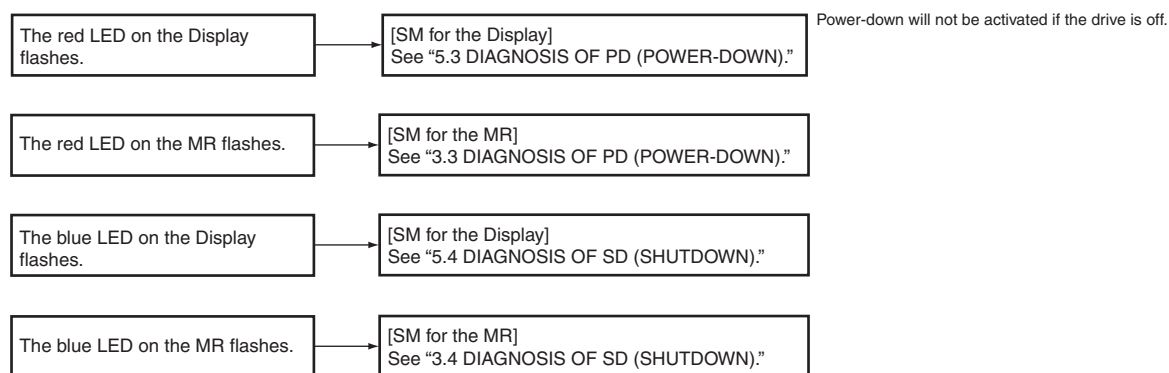
[1] WHOLE UNIT



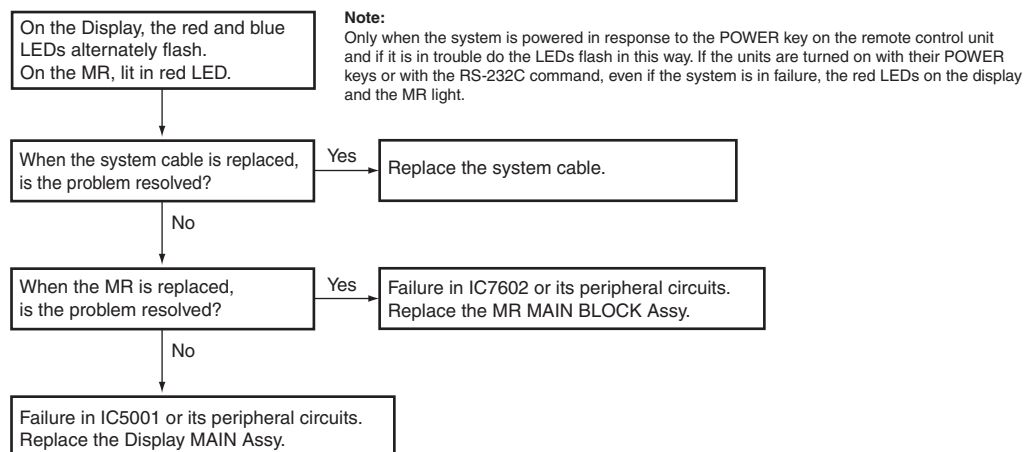
Power-On-Related Problems



PD/SD-Related Problems

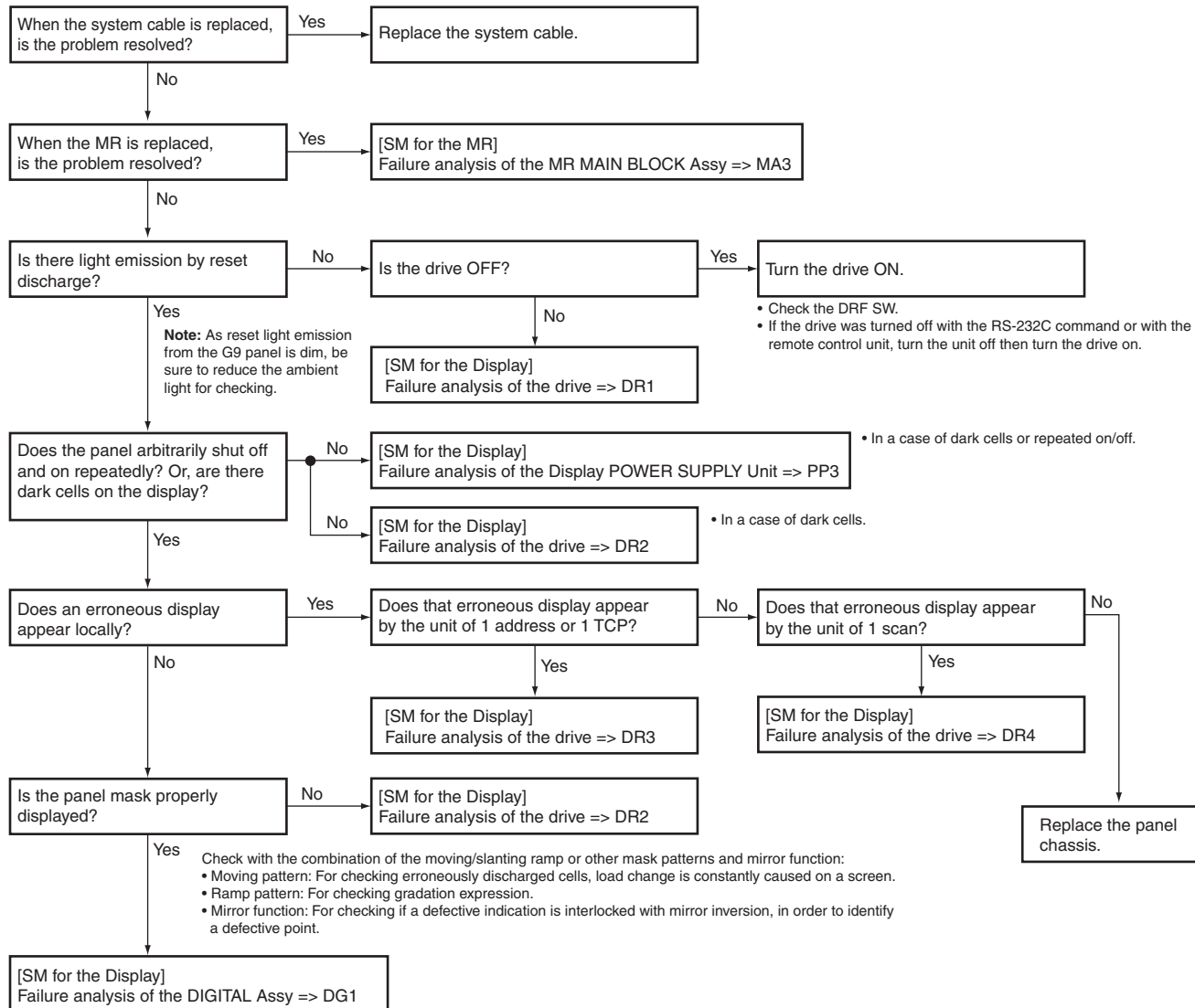


System-Connection-Related Problems



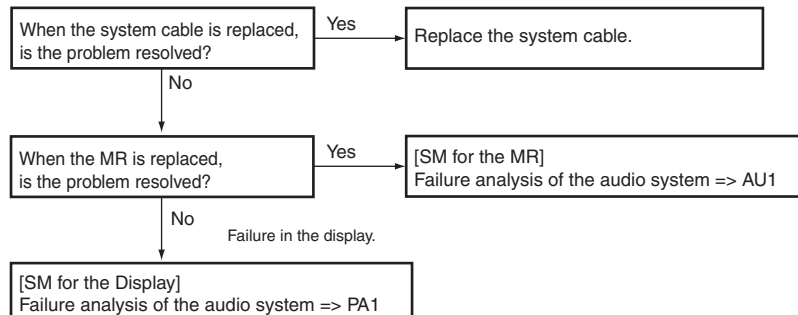
A

Video-Display-Related Problems



E

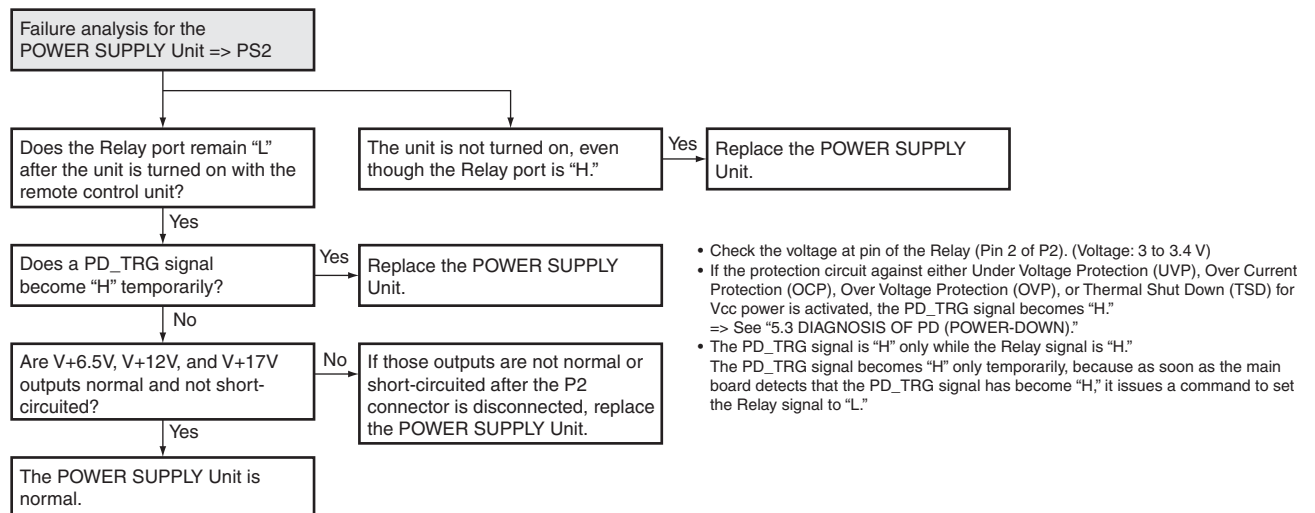
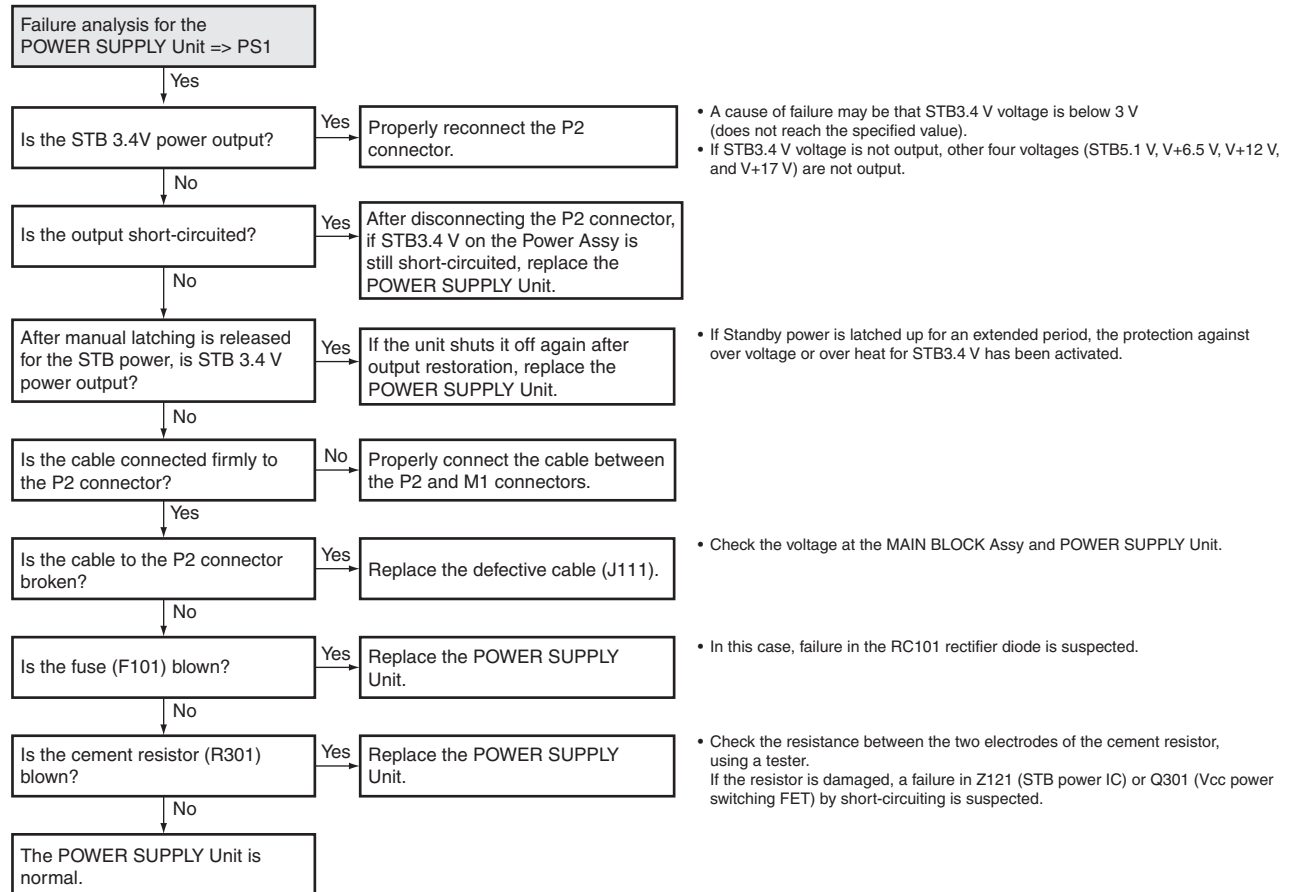
Audio-Related Problems



F

[2] POWER SUPPLY UNIT

Flowchart of Failure Analysis for The POWER SUPPLY Unit



[3] MAIN BLOCK ASSY

Flowchart of Failure Analysis for The MAIN BLOCK Assy

Failure analysis for the
MAIN BLOCK Assy => MA1

The STB LED does not light although
STB 3.4 V power is supplied.

Is resetting of the IF
microcomputer (pin 10) canceled?

No

Replace the MAIN BLOCK Assy.

Failure in the RST IC (IC6801) output or its peripheral circuits.

Yes

Is the voltage at Pin 13 of the M2
connector High?

No

Replace the MAIN BLOCK Assy.

Failure in the line between the IF microcomputer and M2 connector.

Yes

Is the M2 connector securely
connected?

No

Securely connect the M2 connector.

Yes

Is the cable that is connected to
the M2 connector broken?

Yes

Replace the cable (J112).

No

No problem with the MAIN BLOCK
Assy. Check the LED Assy.

Failure analysis for the
MAIN Assy => MA2

The RELAY port does not work.
The power is not turned on.

Are the voltages (1.5 V/2.5 V/3.4 V)
supplied to the main microcomputer?

No

Replace the MAIN BLOCK Assy.

Yes

Is voltage at REQ_IF (TP6830) on
the MAIN BLOCK Assy High
(3.4 V)?

No

Can the unit be turned on, using
the remote control unit?

No

Replace the system cable that
connects between the Display and
MAIN BLOCK Assy (MR).

NG

Replace the MAIN BLOCK Assy.

Yes

Can the unit be turned on, using
the Power switch on the unit?

No

Replace the cable (J112) that
connects between the KEY, LED
and MAIN BLOCK Assys.

NG

Replace the KEY Assy.

NG

Replace the MAIN BLOCK Assy.

Can the unit be turned on, using
RS-232C commands?

No

Replace the 9P cable (J207) that
connects between the REAR IO
and MAIN BLOCK Assys.

NG

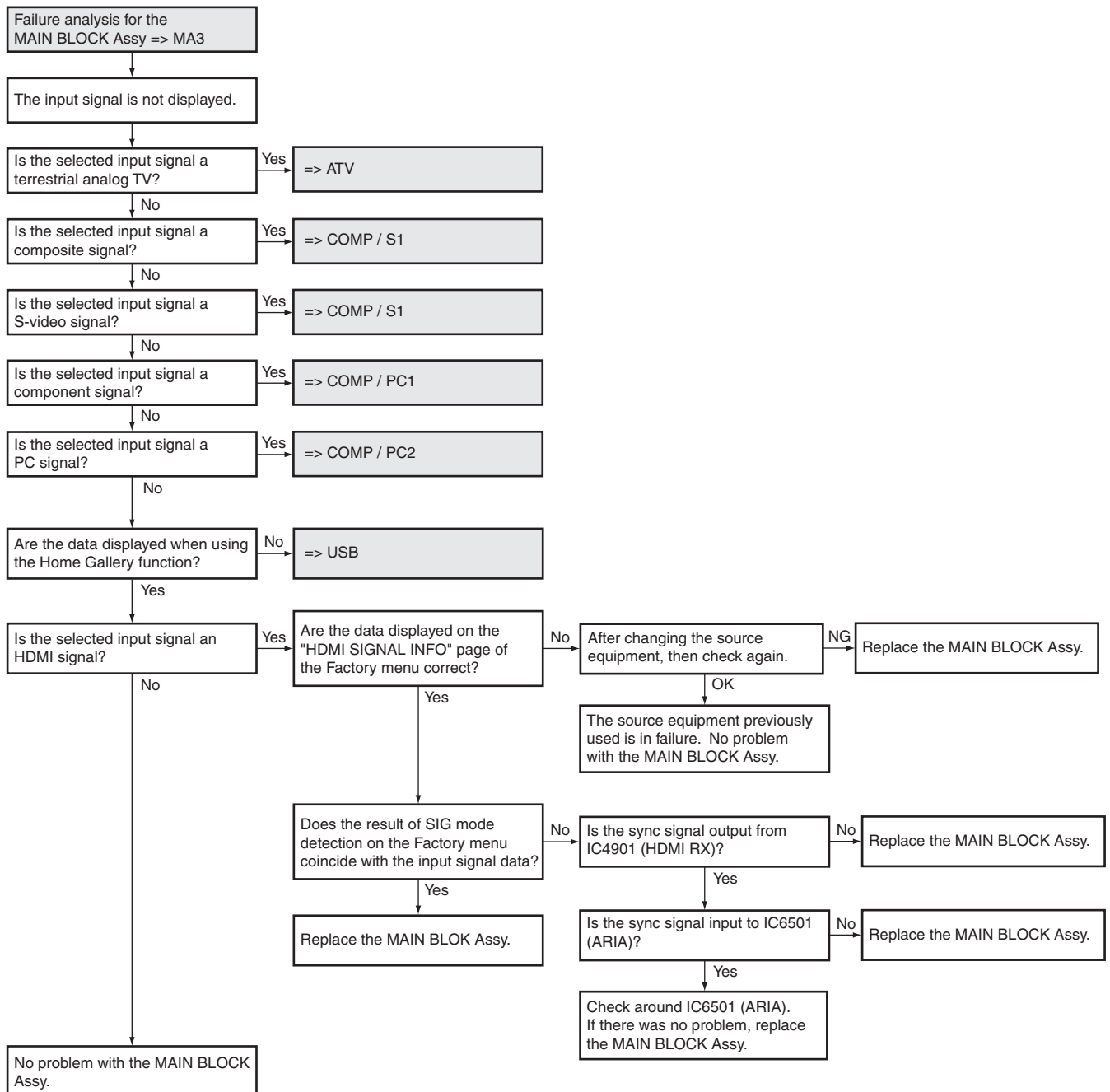
Replace the REAR IO Assy.

NG

Replace the MAIN BLOCK Assy.

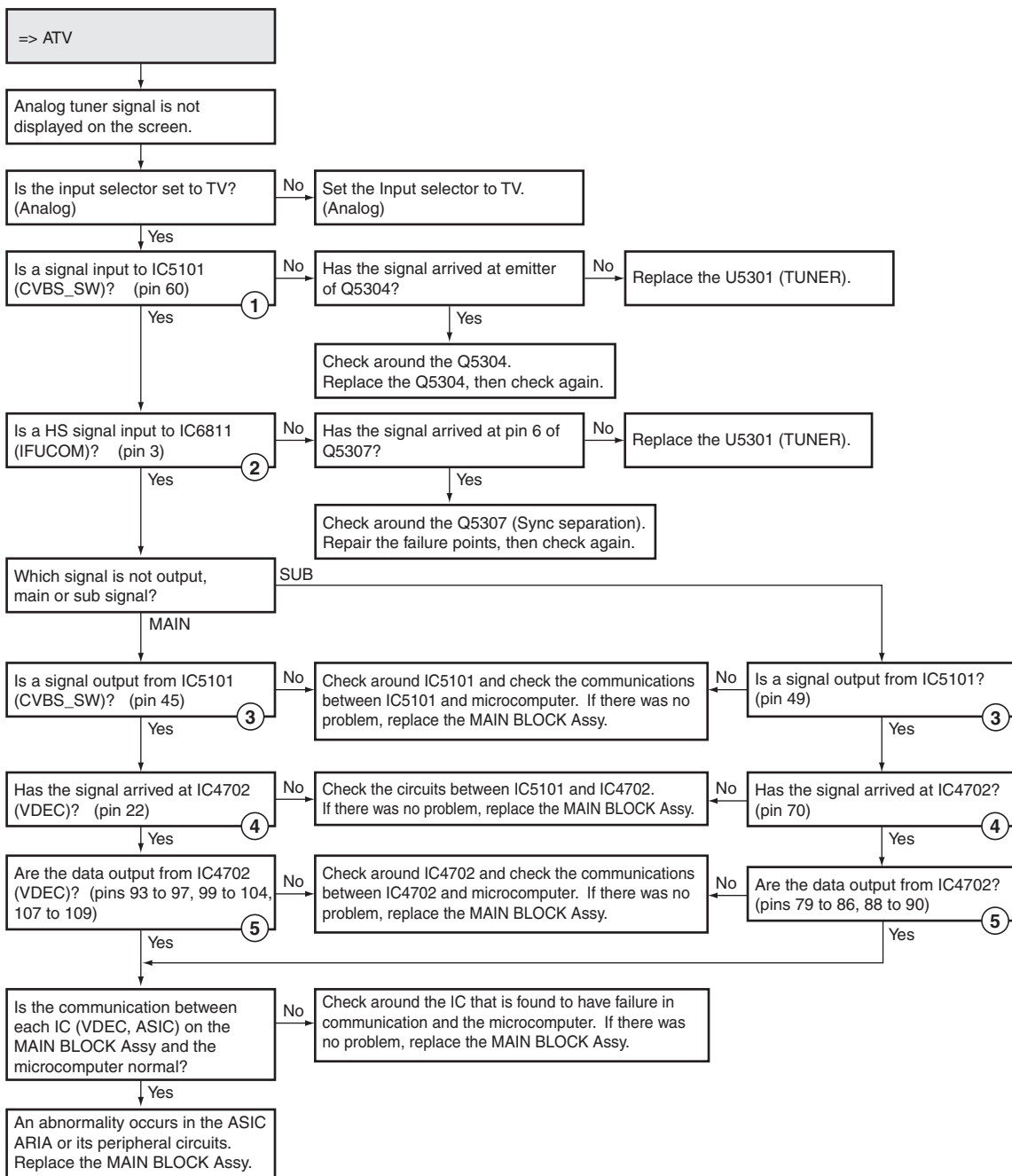
Replace the MAIN BLOCK Assy.

Flowchart of Failure Analysis for The MAIN BLOCK Assy



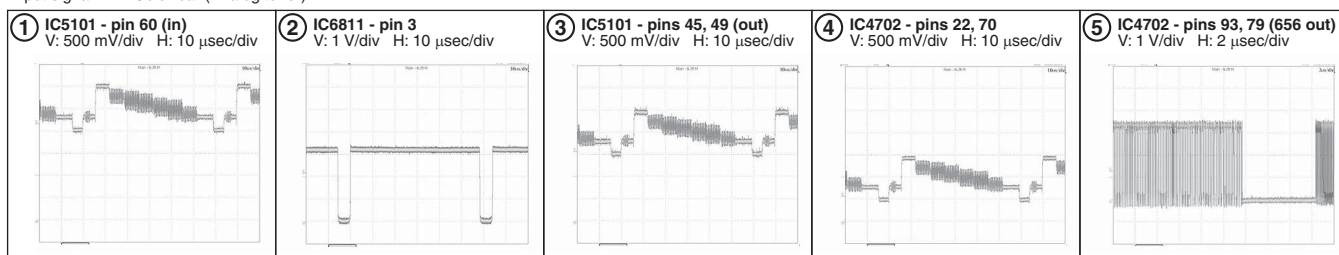
[4] VIDEO SYSTEM

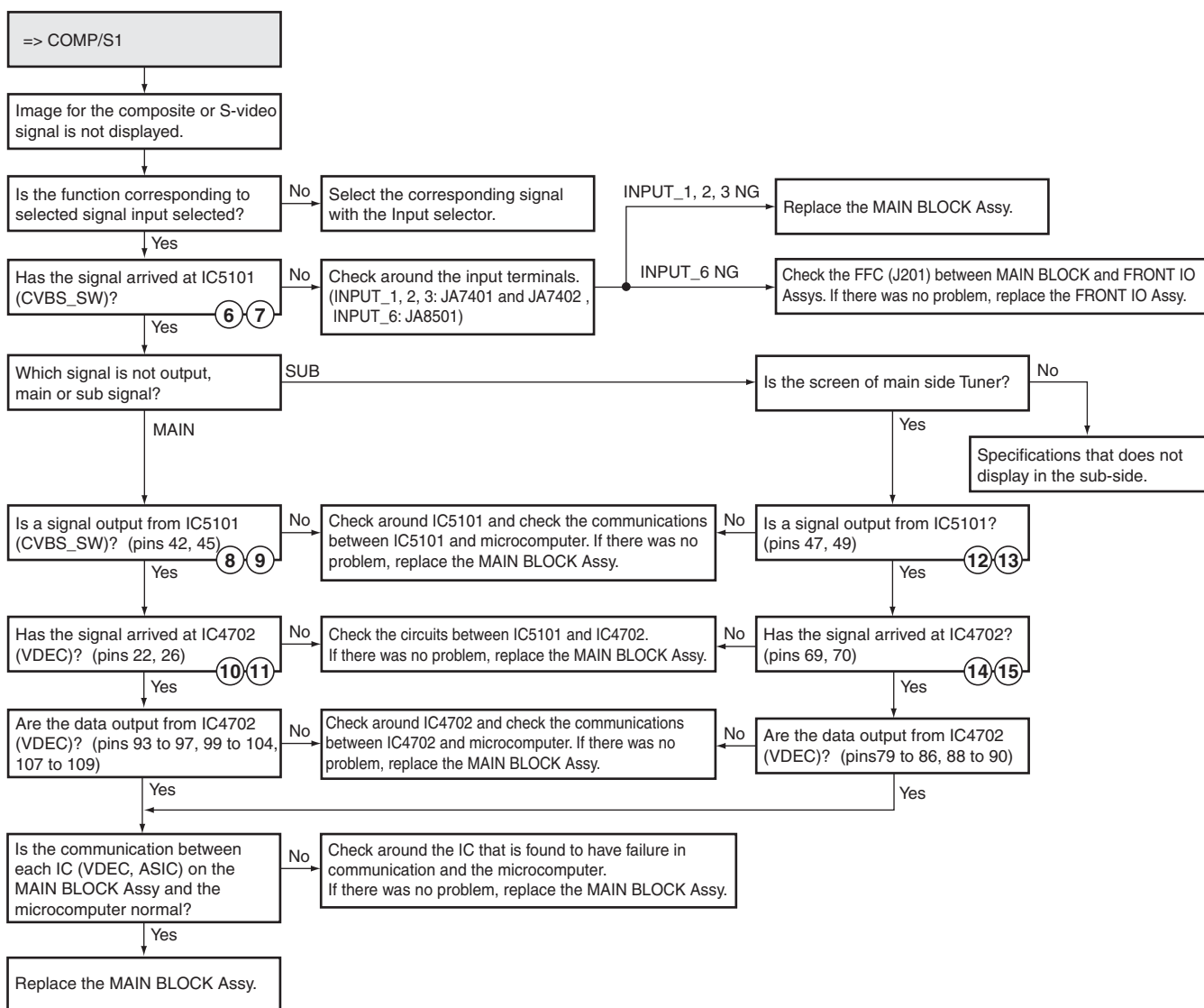
Flowchart of Failure Analysis for The Video System



• Waveforms

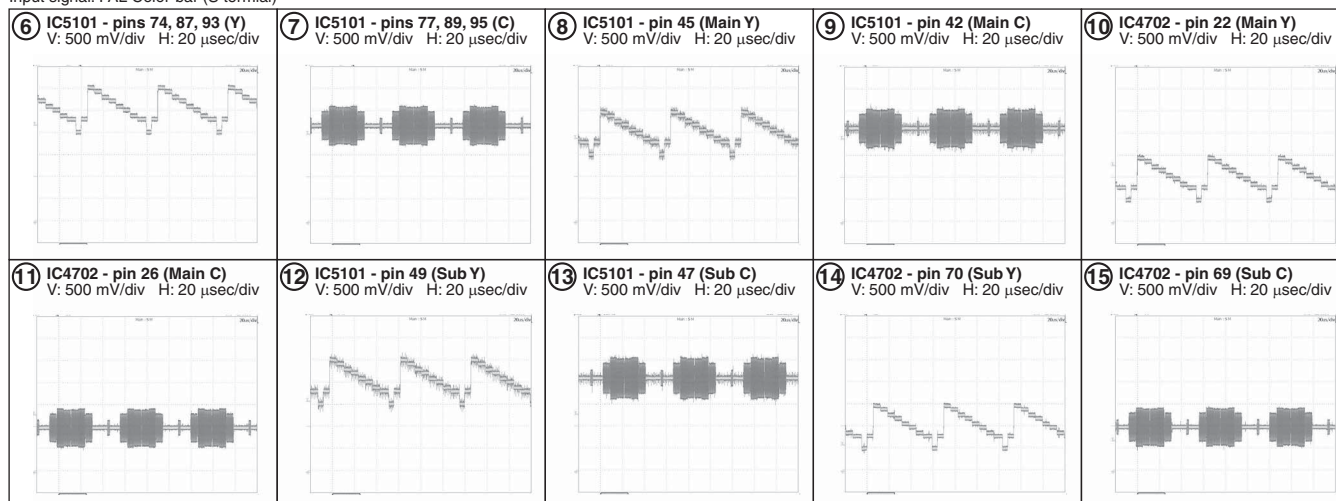
Input signal: PAL Color-bar (Analog tuner)





• Waveforms

Input signal: PAL Color-bar (S terminal)



A

=> COMP/PC1

Image for the component signal is not displayed.

Is the function corresponding to selected signal input selected?

No

Select the corresponding signal with the input selector.

Yes

B

Which signal is not output, main or sub signal?

SUB

Is the screen of main side Tuner?

No

Specifications that does not display in the sub-side.

MAIN

Yes

Has the signal arrived at IC5501 (RGBSW)? (pins 70, 72, 74, 86, 88, 90)

No

Check around a JA7501.

NG

Replace the MAIN BLOCK Assy.

Yes

22 23 24

Is a signal output from IC5501 (RGBSW)? (pins 30, 32, 34)

No

Check around IC5501 and check the communications between IC5501 and microcomputer. If there was no problem, replace the MAIN BLOCK Assy.

Yes

25 26 27

C

Has the signal arrived at IC4801 (ADC)? (pins 43, 48, 54)

No

Check the circuits between IC5501 and IC4801. If there was no problem, replace the MAIN BLOCK Assy.

Yes

28 29 30

Is the communication between each IC (ADC, ASIC) on the MAIN BLOCK Assy and the microcomputer normal?

No

Check around the IC that is found to have failure in communication and the microcomputer. If there was no problem, replace the MAIN BLOCK Assy.

Yes

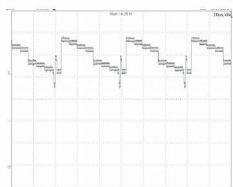
Replace the MAIN BLOCK Assy.

D

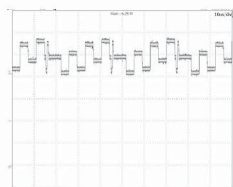
• Waveforms

Input signal: Color-bar (Component 720p/50 Hz)

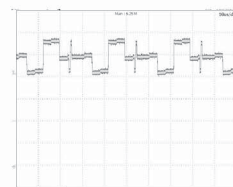
22 IC5501 - pins 70, 86 (Y)
V: 500 mV/div H: 10 μ sec/div



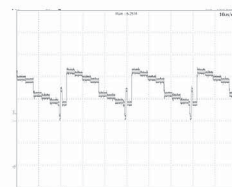
23 IC5501 - pins 72, 88 (Pb)
V: 500 mV/div H: 10 μ sec/div



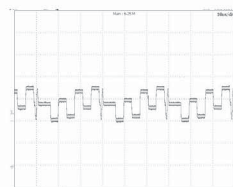
24 IC5501 - pins 74, 90 (Pr)
V: 500 mV/div H: 10 μ sec/div



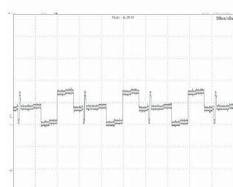
25 IC5501 - pin 34 (Y)
V: 500 mV/div H: 10 μ sec/div



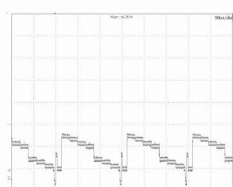
26 IC5501 - pin 32 (Pb)
V: 500 mV/div H: 10 μ sec/div



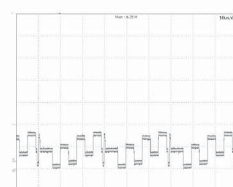
27 IC5501 - pin 30 (Pr)
V: 500 mV/div H: 10 μ sec/div



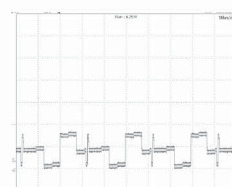
28 IC4801 - pin 48 (Y)
V: 500 mV/div H: 10 μ sec/div



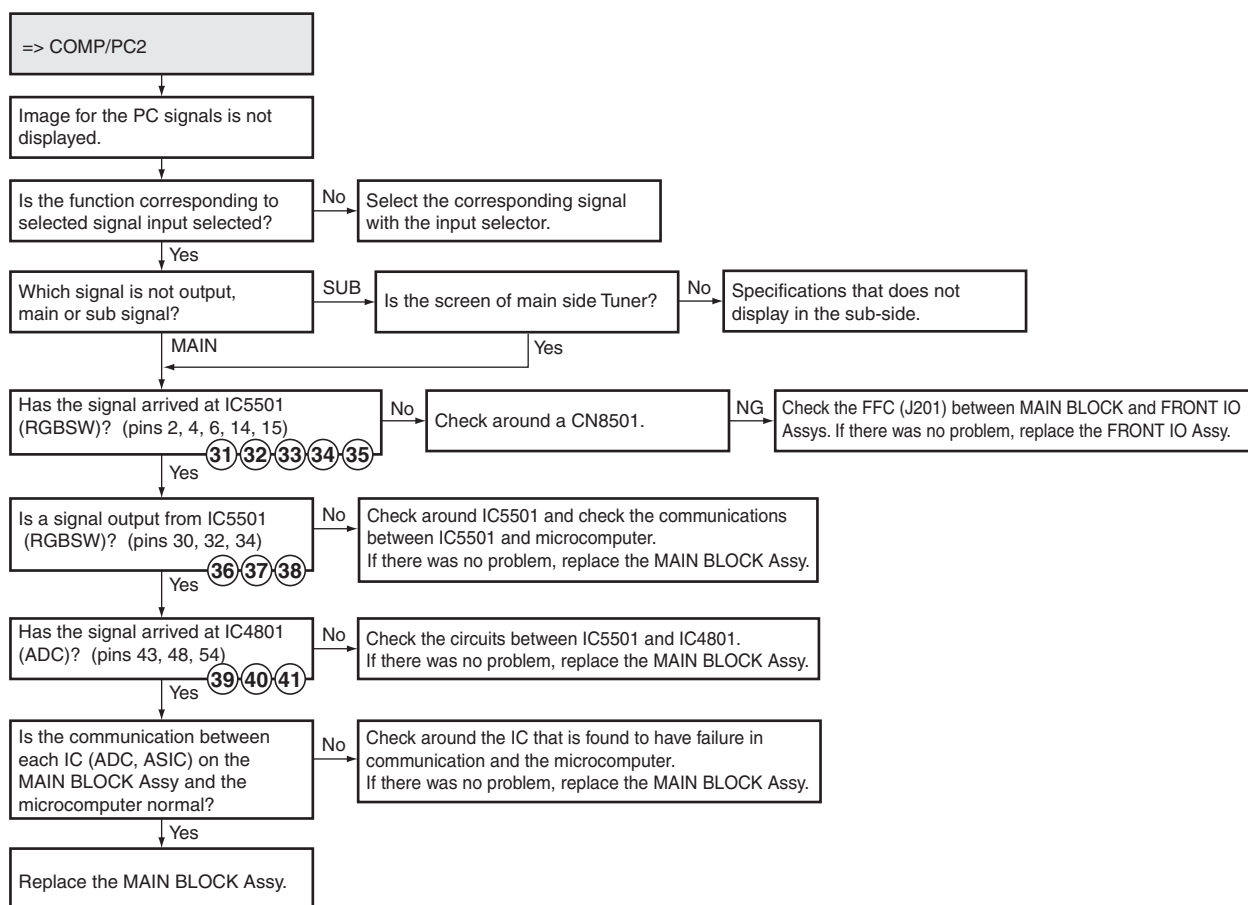
29 IC4801 - pin 43 (Pb)
V: 500 mV/div H: 10 μ sec/div



30 IC4801 - pin 54 (Pr)
V: 500 mV/div H: 10 μ sec/div

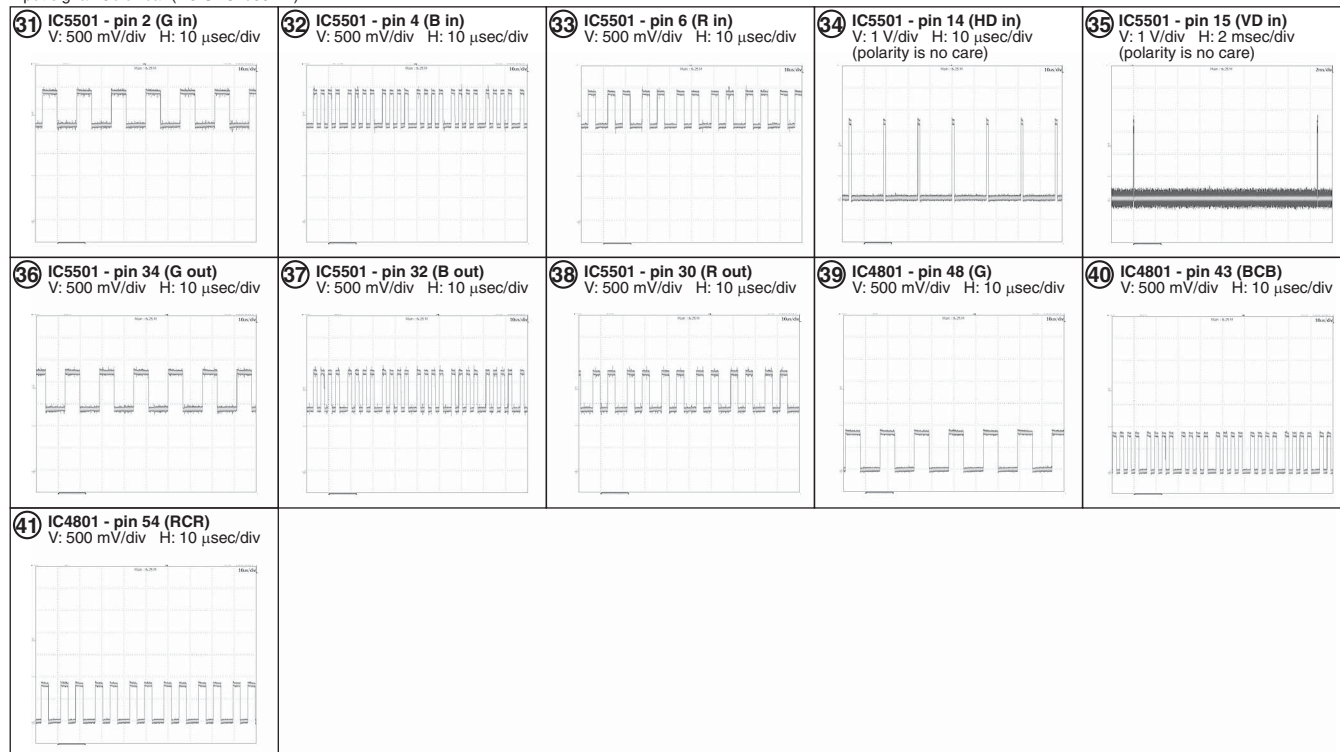


F



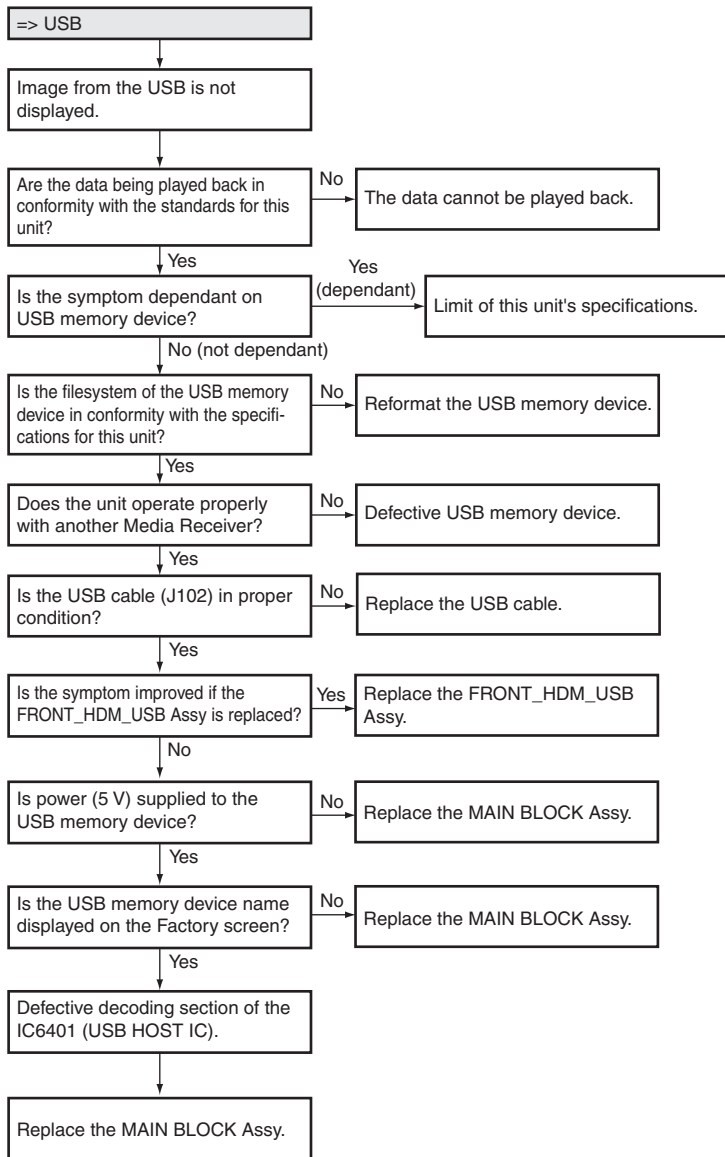
• Waveforms

Input signal: Color-bar (PC SXGA/60 Hz)



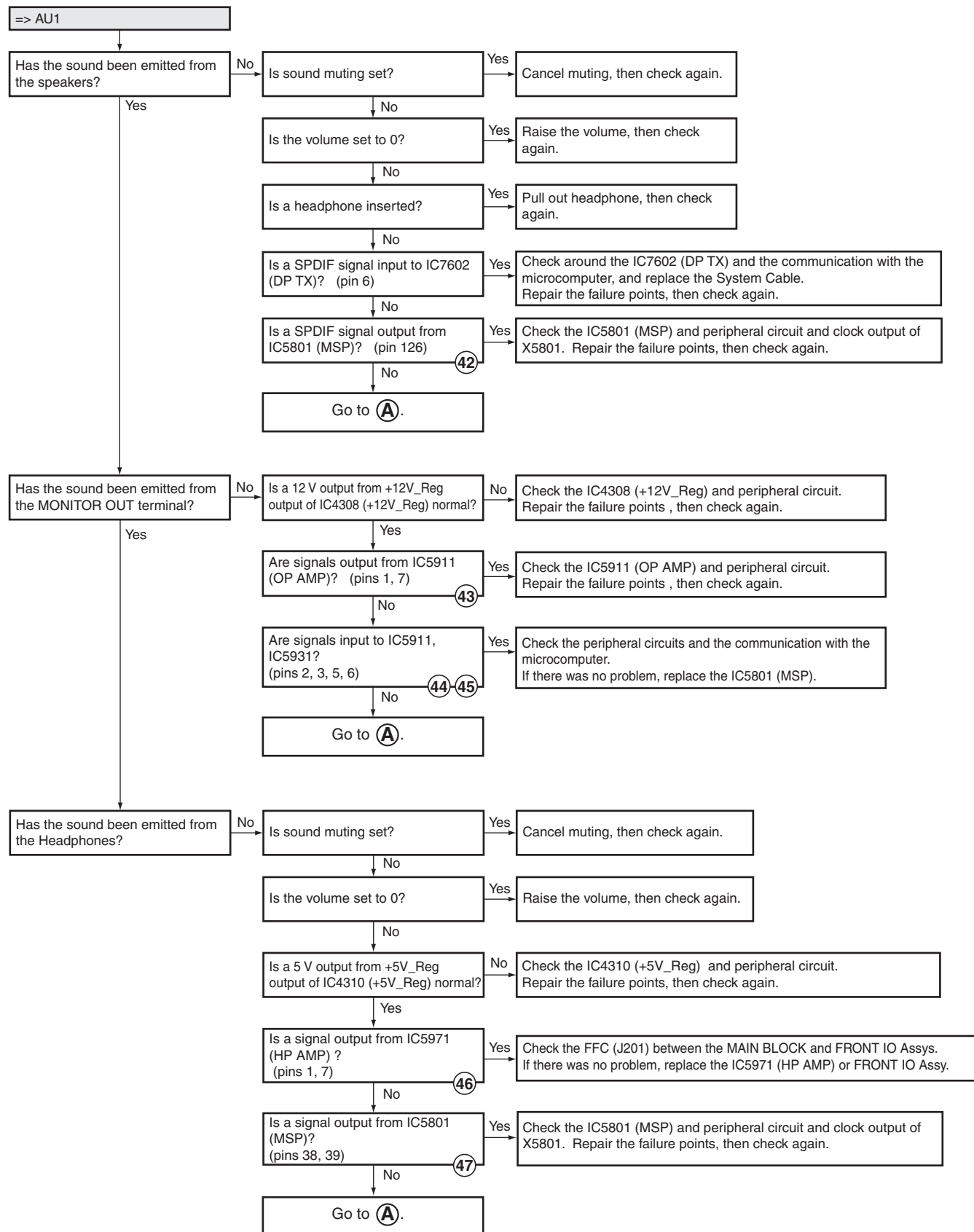
[5] HOME GALLERY

Flowchart of Failure Analysis for The Home Gallery



[6] AUDIO SYSTEM

Flowchart of Failure Analysis for The Audio System



A

A

Has the sound of the Analog broadcasting output?

No
Is a SIF signal input to IC5801 (MSP)? (pin 68)

No
Check the communications between the U5301 (FRONTEND) and the microcomputer and between the U5301 and IC5801. If there was no problem, replace the U5301 (FRONTEND), then check again.

Yes

Yes
Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace the IC5801 (MSP), then check again.

B

Has the sound of the HDMI output?

No
Check that the HDMI switch of the MENU is properly set.

No
Set a MENU definitely, then check again.

Yes

Yes
Is a SPDIF signal output from IC4901 (HDMI RX)? (pin 78)

No
Check the circuits between IC5001 (HDMI SW) and IC4901 (HDMI RX). If there was no problem, replace the MAIN BLOCK Assy.

Yes

Is a SPDIF signal input to IC5801 (MSP)? (pin 4)

No
Check the communications around the IC4901 (HDMI RX). If there was no problem, replace the MAIN BLOCK Assy.

Yes

Yes
Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace IC5801 (MSP), then check again.

C

Has the sound of the INPUT 1, 2, 3 (RCA) output?

No
Is a signal input to IC5801 (MSP)? (pins 24 to 27, 34, 35)

No
Check the circuits between JA7401 and IC5801. If there was no problem, replace the MAIN BLOCK Assy.

Yes

Yes
Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace IC5801 (MSP), then check again.

Has the sound of INPUT 6, PC (RCA) output?

No
Is a signal input to IC5801 (MSP)? (pins 30, 31)

No
Check the FFC (J201) between the MAIN BLOCK and FRONT IO Assy. If there was no problem, replace the FRONT IO Assy.

Yes

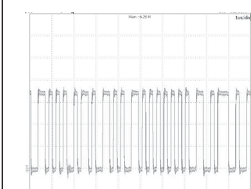
Yes
Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace IC5801 (MSP), then check again.

D

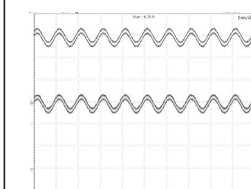
Waveforms

Input signal: L/R 1 kHz, 0.5 Vrms (VOL 30)

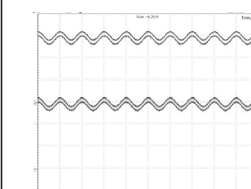
④② IC5801 - pin 126
V: 1 V/div H: 1 μ S/div



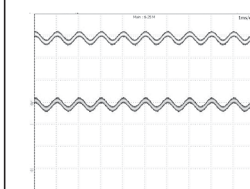
④③ IC5911 - pins 1, 7
V: 2 V/div H: 1 mS/div



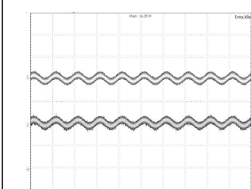
④④ IC5911 - pins 2, 3
V: 2 V/div H: 1 mS/div



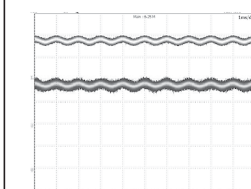
④⑤ IC5911 - pins 5, 6
V: 2 V/div H: 1 mS/div



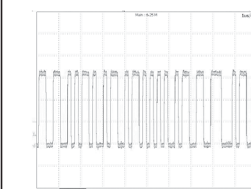
④⑥ IC5971 - pins 1, 7
V: 1 V/div H: 1 mS/div



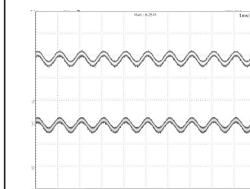
④⑦ IC5801 - pins 38, 39
V: 1 V/div H: 1 mS/div



④⑧ IC4901 - pin 78
V: 2 V/div H: 1 μ S/div



④⑨ IC5801 - pins 24, 25
V: 2 V/div H: 1 mS/div



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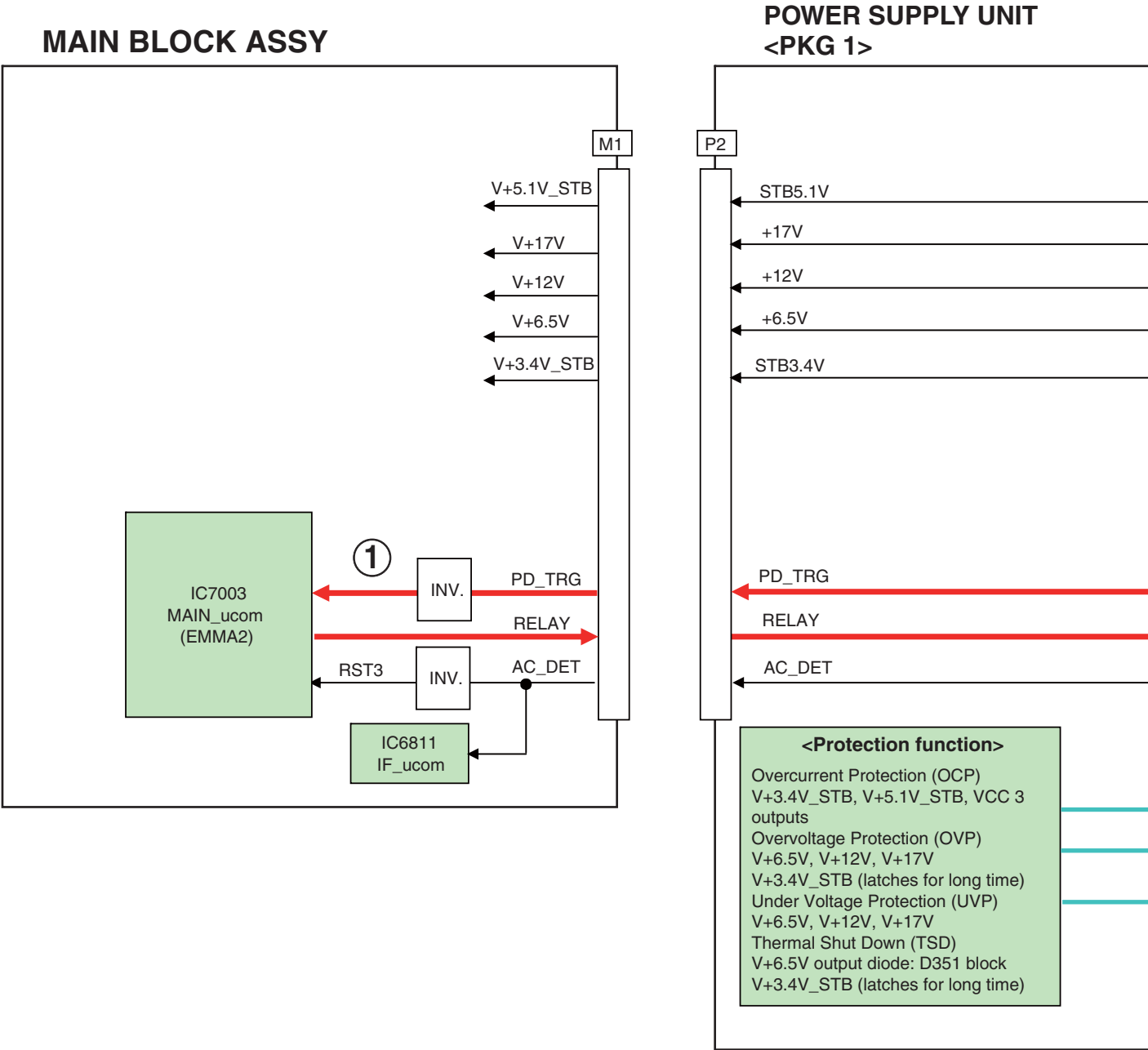
8

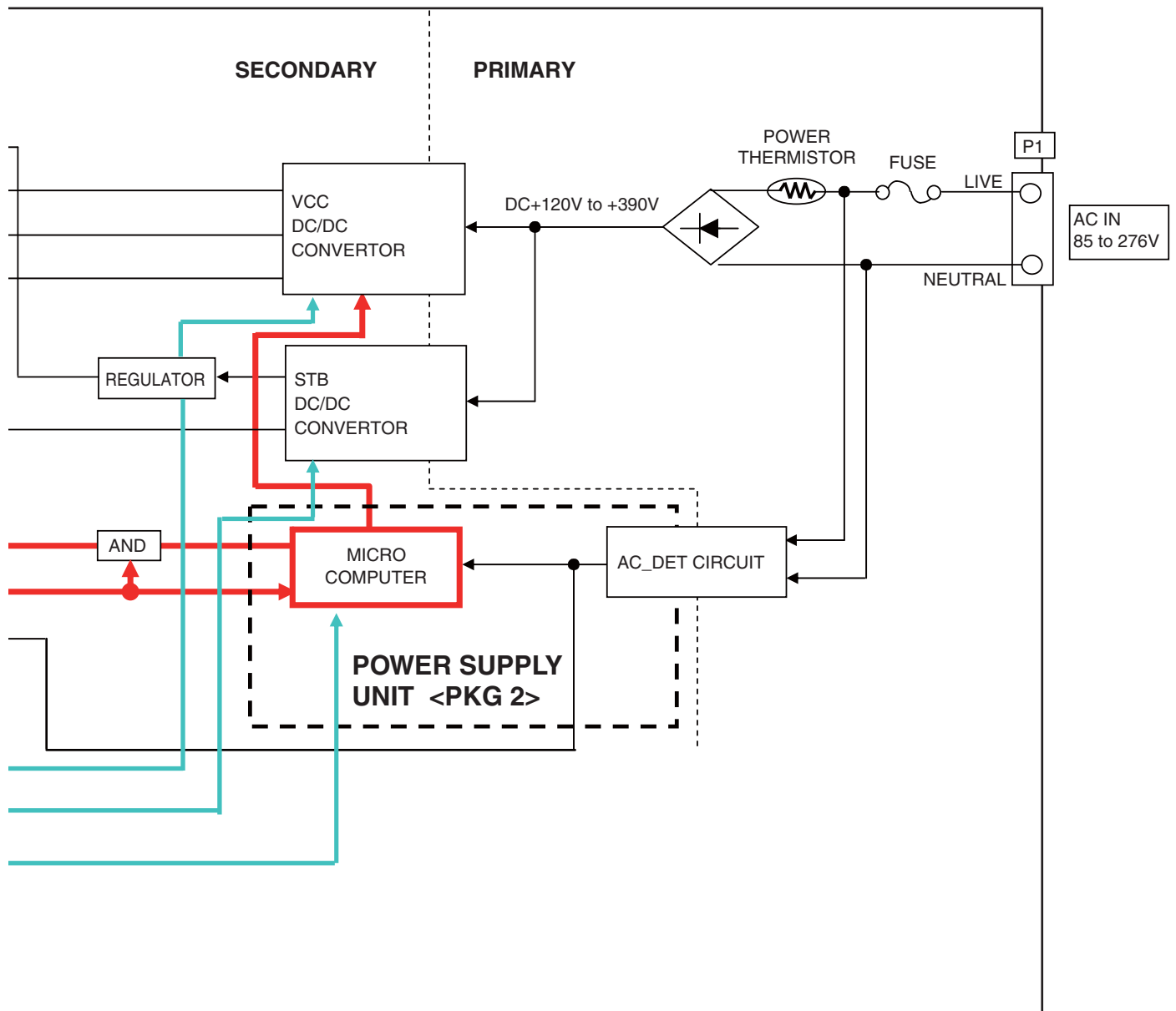
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KRP-M01

[1] BLOCK DIAGRAM OF THE POWER-DOWN SIGNAL

Note:
The figure ① indicate the number of times the Red LED flashes when power-down occurs in the corresponding route.





[2] PD (POWER-DOWN) DIAGNOSIS OF FAILURE ANALYSIS

How to Distinguish the PD (Power-Down)

About the LED for checking causes of power-down

No LED for checking causes of power-down is provided for the POWER SUPPLY Unit of the MR. However, by checking the waveforms at terminals of the microcomputer, whether a power-down was caused by failure in the POWER SUPPLY Unit, and if it was, which power system among the four was in failure can be inferred. The points at which to check waveforms and how to distinguish power-down causes are described below:

<Points at which to Check Waveforms>

Waveforms between Pin 3 of CN801 and GND (secondary radiator, display chassis, etc.) Refer to the section "Note on Removing the POWER SUPPLY Unit from the Chassis and Method for Resetting Standby Power Latchup" in the "7.2 DISASSEMBLY".

<How to Distinguish>

If a power-down was caused by failure in the POWER SUPPLY Unit, a pulse waveform is output at the above-mentioned points. (It is assumed that STB3.4 V power is properly output.)

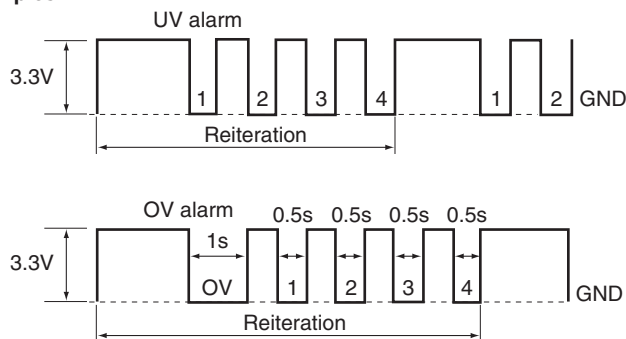
By counting the frequency of "Lo" in the pulse waveform, the cause of power-down can be identified.

Frequency of "Lo"	Cause	
	Output Voltage	Overvoltage (OV) or Undervoltage (UV)
Once	+12V	OV or UV *
Twice	+17V	OV or UV *
3 times	+6.5V	OV or UV *
4 times	Protection against overheat	

*How to distinguish OV and UV:

If the first "Lo" duration of a pulse is long (1 s), the cause is OV. As the three output voltages are electromagnetically linked and interact with one another, the frequency may vary among 1-3, depending on the type of power-down.

Examples:



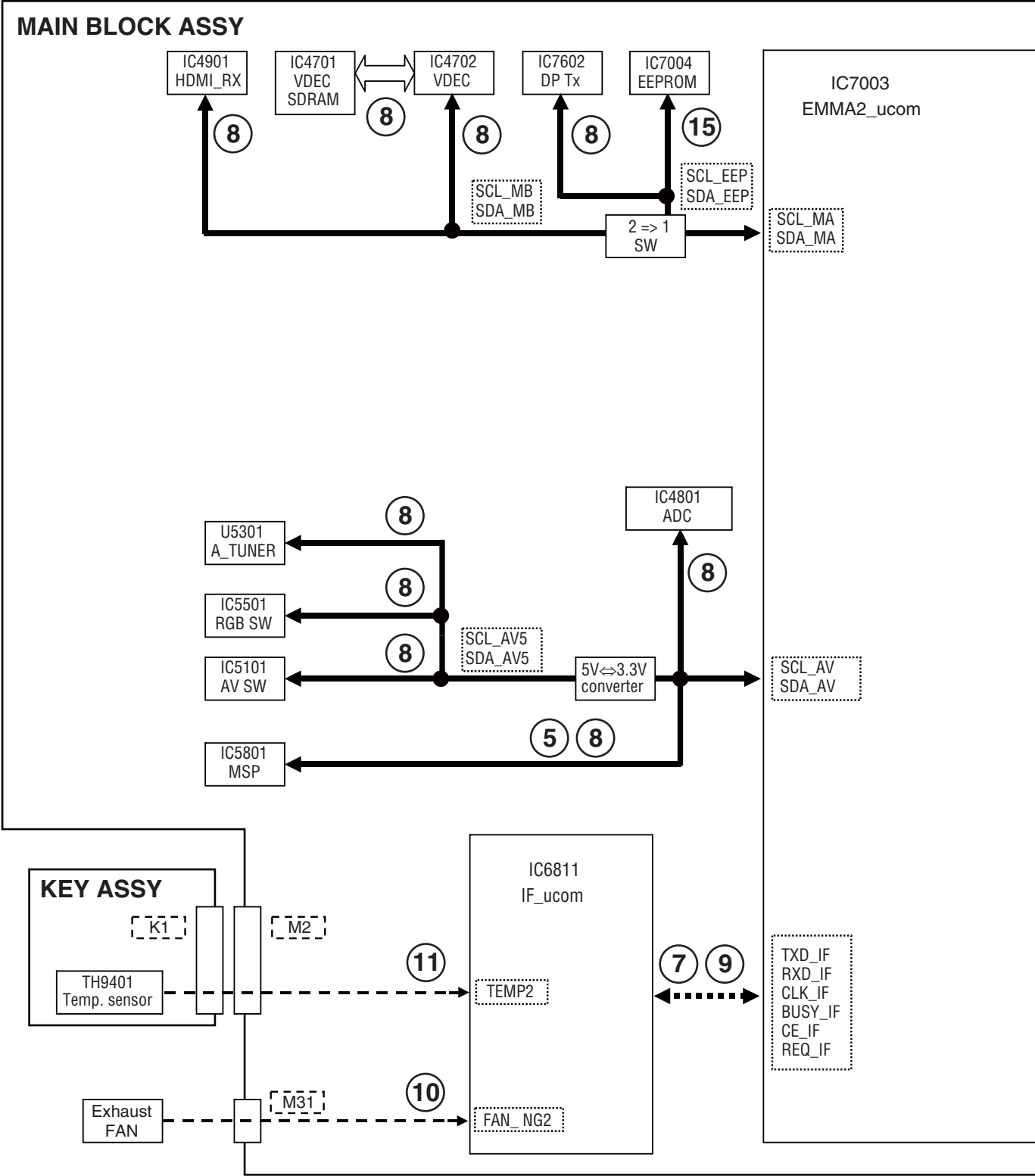
How to Diagnose the PD

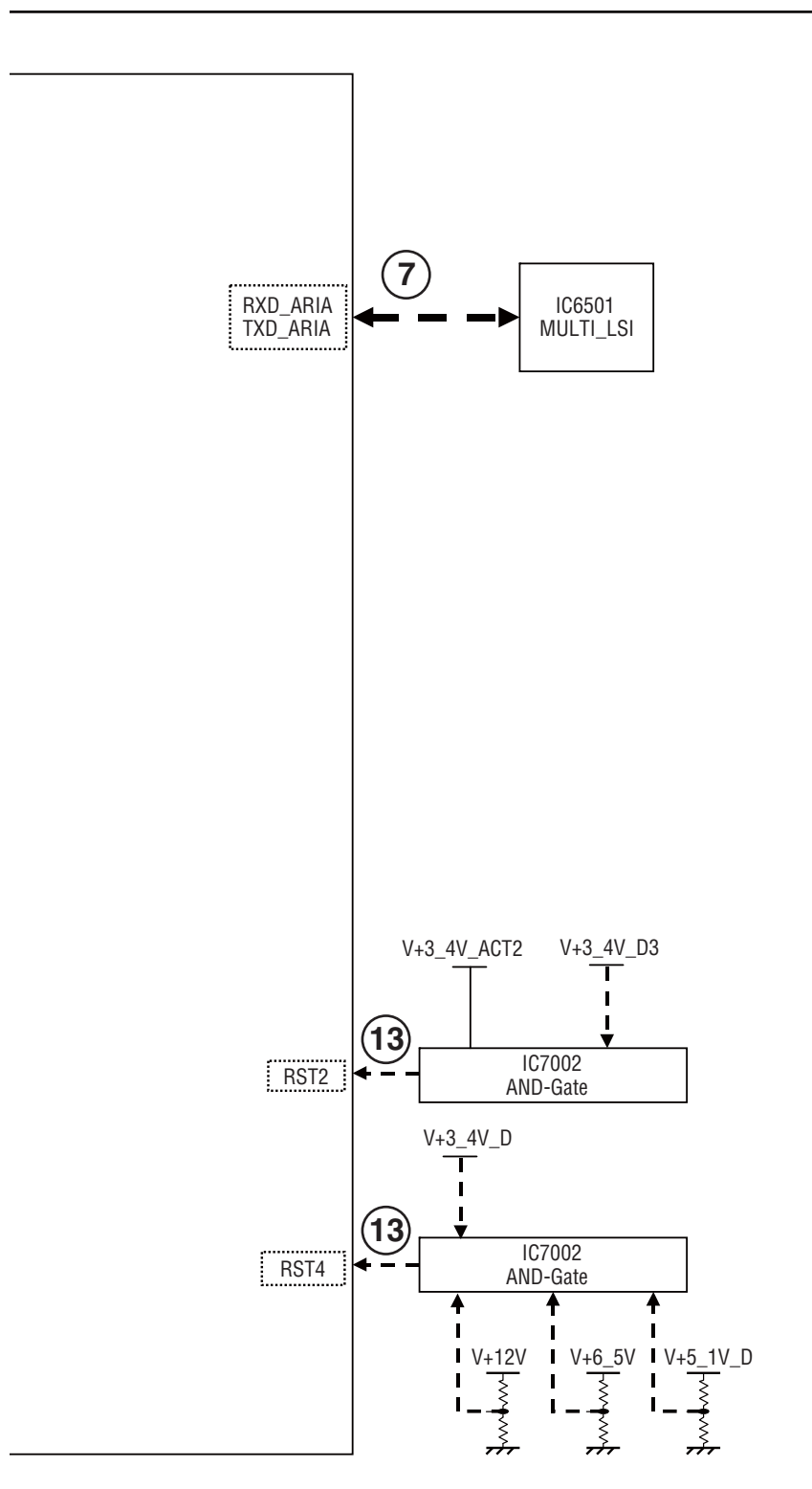
Frequency of LED Flashing	History Indication in Factory Mode	Assy	Cause of power-down (activated protection circuit)	Point to be Checked	Possible Defective Parts
Red, once	MR-PWR	MAIN BLOCK Assy	Overcurrent in 6.5 V power	5V_ANT-REG	IC4305, C4305
				5V_IO-REG	IC4310, C4301
				3CH-DD converter	IC4402 C4405, C4406, C4409, C4463, C4464, C4466 to C4468
				FET	Q4417, Q4416, Q4411
				1CH-DD converter	IC4501, C4517
			Overcurrent in 12 V power	FAN-REG	IC4302, C4342
				8V_IO-REG	IC4309, C4315
				LNB	IC4503
			Overcurrent in 17 V power	12V_IO-REG	IC4308, C4303
			Overcurrent in 3.4 V power	1.8V_IO-REG	IC4604, C4609 C4820, C8103
		POWER SUPPLY Unit	V+6.5V UVP	TP V+6.5V	Voltage drop due to overcurrent on the load side
			V+12V UVP	TP V+12V	Voltage drop due to overcurrent on the load side
			V+17V UVP	TP V+17V	Voltage drop due to overcurrent on the load side
			STB3.4V OCP	TP STB3.4V	C151, C153, C152, D152, or Z152, and abnormal current on the load side that is connected to STB3.4 V power
			STB5.1V OCP	TP STB5.1V	C155 and abnormal current on the load side that is connected to STB5.1 V power And abnormal current on the load side that is connected to STB5.1 V power
			VCC OCP	TP V+6.5V	D351, C351, C352, C353, and abnormal current on the load side that is connected to V+6.5V power
				TP V+12V	D352, C357, C358, and abnormal current on the load side that is connected to V+12V power
				TP V+17V	D353, C359, and abnormal current on the load side that is connected to V+17V power
			STB3.4V OVP	TP STB3.4V	PC121, Z151
			VCC OVP	TP V+6.5V TP V+12V	PC301, Breakage in the line to/from the P2 output connector Z351
			STB3.4V TSD		Z121 control IC and abnormal current on the load side that is connected to STB3.4 V power
			V+6.5V Rectifier diode (D351) TSD		D351 or D352, and abnormal current on the load sides that is connected to V+6.5 V and V+12 V

Note: Although replacement of the whole POWER SUPPLY Unit is required (replacement of only defective parts on the POWER SUPPLY Unit is not possible), the circuit symbols are described for reference

[1] BLOCK DIAGRAM OF THE SHUTDOWN SIGNAL

Note : The figures ① to ⑮ indicate the number of times the Blue LED flashes when shut-down occurs in the corresponding route. ⑫ LED is not flashed.





[2] SD (SHUTDOWN) DIAGNOSIS

Frequency of LED Flashing	Major Type	Detailed Type	Log Indication in Factory Mode		
			MAIN	SUB	
Blue 5	Audio	Abnormality in MSP	AUDIO	MSPMAP	
Blue 7	Failure in 3-wire serial communication with the main microcomputer	IF microcomputer	MA-3L	IF	
		MULTI		MULTI	
Blue 8	Failure in IIC communication with the main microcomputer	Tuner1	MA-IIC	FE1	
		MSP/MAP		MSPMAP	
		AV Switch		AV-SW	
		RGB Switch		RGB-SW	
		Main VDEC		VDEC	
		VDEC SDRAM		SDRAM	
		AD/PLL		ADC	
		HDMI		HDMI	
		DisplayPort Tx		DP-TX	
Blue 9	Failure in communication with the main microcomputer	—	MAIN	—	
Blue 10	Abnormality in FAN	FAN2	FAN	FAN2	
Blue 11	High temperature of the unit	—	TEMP2	—	
Blue 12	Digital Tuner	—	—	—	
Blue 13	Failure in the power supply	DC-DC Converter power decrease	RST-MA	M-DCDC	
		POWER SUPPLY		RELAY	
Blue 15	Main EEPROM	Main EEPROM communication error	MA-EEP	—	

A

Checkpoint	Possible Defective Part	Remarks
Power supply for MSP and MSP	IC5801, IC4604, Q4616	Check the MSP, its power and periphery parts (e.g. reset line).
Communication line between IF and MAIN	IC7003, IC6811	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
Communication line between MULTI and MAIN	IC7003, IC6501	Check the communication lines (TXD_ARIA/RXD_ARIA)
IIC communication line between Tuner and MAIN	U5301, IC7003	Check the communication lines (SCL_TU/SDA_TU or SCL_AV/SDA_AV)
IIC communication line between MSP/MAP and MAIN	IC5801, IC7003	Check the communication lines (SCL_AV/SDA_AV)
IIC communication line between AV_SW and MAIN	IC5101, IC7003	Check the communication lines (SCL_AV5/SDA_AV5)
IIC communication line between RGB_SW and MAIN	IC5501, IC7003	Check the communication lines (SCL_AV5/SDA_AV5)
IIC communication line between M_VDEC and MAIN	IC4702, IC7003	Check the communication lines (SCL_MB/SDA_MB)
Communication line between VDEC and SDRAM	IC4701, IC4702	Check the communication lines (SDRAM), Failure in SDRAM
IIC communication line between ADC and MAIN	IC4801, IC7003	Check the communication lines (SCL_AV/SDA_AV)
IIC communication line between HDMI_RX and MAIN	IC4901, IC7003	Check the communication lines (SCL_MB/SDA_MB)
IIC communication line between DP_TX and MAIN	IC7602, IC7003	Check the communication lines (SCL_EEP/SDA_EEP)
Communication line between IF and MAIN	IC6811, IC7003	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
Dirt attached to the fan motor		Check the fan. (SD10 does not detect it at the temperature that fans do not turn.)
Periphery of the FAN		FAN_NG
Periphery of the cable at M31		Check if cables are firmly connected.
Periphery of the fan control regulator	IC4302	Check that the voltage outputs it.
Ambient temperature		TEMP2 A shutdown occurs because of high temperature.
Temperature sensor or its periphery	TH9401	TEMP2
Periphery of the cable between M2 and K1	CN4204, CN9401	Check if cables are firmly connected.
—	—	—
RST2 V+3_4V_ACT2, V+3_4V_D3	IC7002	Check if each voltages are started.
RST4 V+12V, V+6_5V, V+5_1V_D, V+3_4V_D	IC7002	Check if each voltages are started.
V+12V, V+6_5V, V+17V	POWER SUPPLY Unit	Check if each voltages are started.
Check the cable M1	CN4203	Check if cables are firmly connected.
IIC communication line between EEPROM and MAIN	IC7004, IC7003	Check the communication lines (SCL_EEP/SDA_EEP)

B

C

D

E

F

3.5 NON-FAILURE INFORMATION

[1] INFORMATION ON SYMPTOMS THAT DO NOT CONSTITUTE FAILURE

Symptom	Cause, item to check, information
HDMI: Symptoms concerning the input format and settings	
The picture color for an INPUT 3 or 4 or 5 signal is not correct.	The color setting for INPUT 3 or 4 or 5 is not compatible with that of the output equipment. Check whether the color setting is YPbPr or RGB.
The video signal to INPUT 3 or 4 or 5 is not displayed, and a message is displayed.	A unsupported video signal is input.
The audio signal input to the INPUT 3 is not output. No HDMI signal is input.	The audio setting for INPUT 3 is any setting and a video signal is not input. If the audio setting is any setting to output an analog audio signal, the HDMI signal must be input. (If a DVI device is to be connected, use a DVI-HDMI conversion cable.) If the HDMI video signal is not input, the analog audio signal is not output.
No sound of signals to INPUT 3 or 4 or 5 is output.	The setting on the side of the HDMI output equipment is wrong. (Example: Dolby Digital)
The 1080p input signal is not displayed properly or at all, although the 1080i input signal is displayed properly.	Check that the connected cable supports HDMI Category 2. (As the clock frequency for the 1080p signal is triple that for the 1080i signal, signal degradation caused by a cable must not be neglected. A cable supporting HDMI Category 2 can be used for the 1080p signal. Although some conventional cables can support the 1080p signal, some others cannot.)
MONITOR video output	
The video output signal from the MONITOR output is deteriorated. Or when the video output signal from the MONITOR output is recorded, its playback picture is deteriorated.	The video signal output from the MONITOR output is Macrovision protected.
The video signal is not output when the component signal is input to INPUT 1 or 2.	The video signal is not output from the MONITOR output when the component signal is selected.
The video signal is not output when the video signal is input to INPUT 3 or 4 or 5.	The video signal is not output from the MONITOR output when the HDMI signal is selected.
MONITOR audio output	
The image displayed on the PDP is not synchronized with the sound from the MONITOR audio output.	The audio signal from the MONITOR output is synchronized with the video output signal from the MONITOR output.
Miscellaneous	
The no-signal off function is not activated.	The no-signal off and no-operation off functions are effective only if video (composite, S video, component, HDMI (excluding PC)) input or TV input is selected.
The no-operation off function is not activated.	
Power management does not function.	Power Management is effective only while an analog PC signal is being input. It is not effective with HDMI-PC signal input.
The AUTO SETUP function is not activated.	The Auto Setup function is effective only while an analog PC signal is being input. This function does not work if an analog PC signal is not input, even if the INPUT PC is selected.
The picture-quality setting (AV Selection) is not stored.	The picture-quality setting is stored for each input. As the setting is changed when another input is selected, the user may have a false idea that the setting is not stored.
The picture size changes arbitrary.	The Auto Size setting is set to ON.
The display position of the screen changes slightly while the screen is on.	The orbiter function for minimizing the effects of phosphor burn is activated. Although the setting for this function can be changed on the Home menu, retaining the factory setting is strongly recommended.
The video signal to the S video connector is not displayed.	The component video cable is connected to the same input function as for the S video (even if no signal is input to the component video connector, merely having something plugged in to the connector will result in judgement that a signal is being fed in and the component video connector takes priority). (Priority of connectors: component video > S video > composite video)
The video signal to the composite video connector is not displayed.	The S Video or component video cable is connected to the same input function as for the composite video. (Priority of connectors : component video > S video > composite video)

SUPPLEMENT: On the video setting for HDMI

There are three types of HDMI output formats: color difference 4:4:4, color difference 4:2:2, and RGB4:4:4.

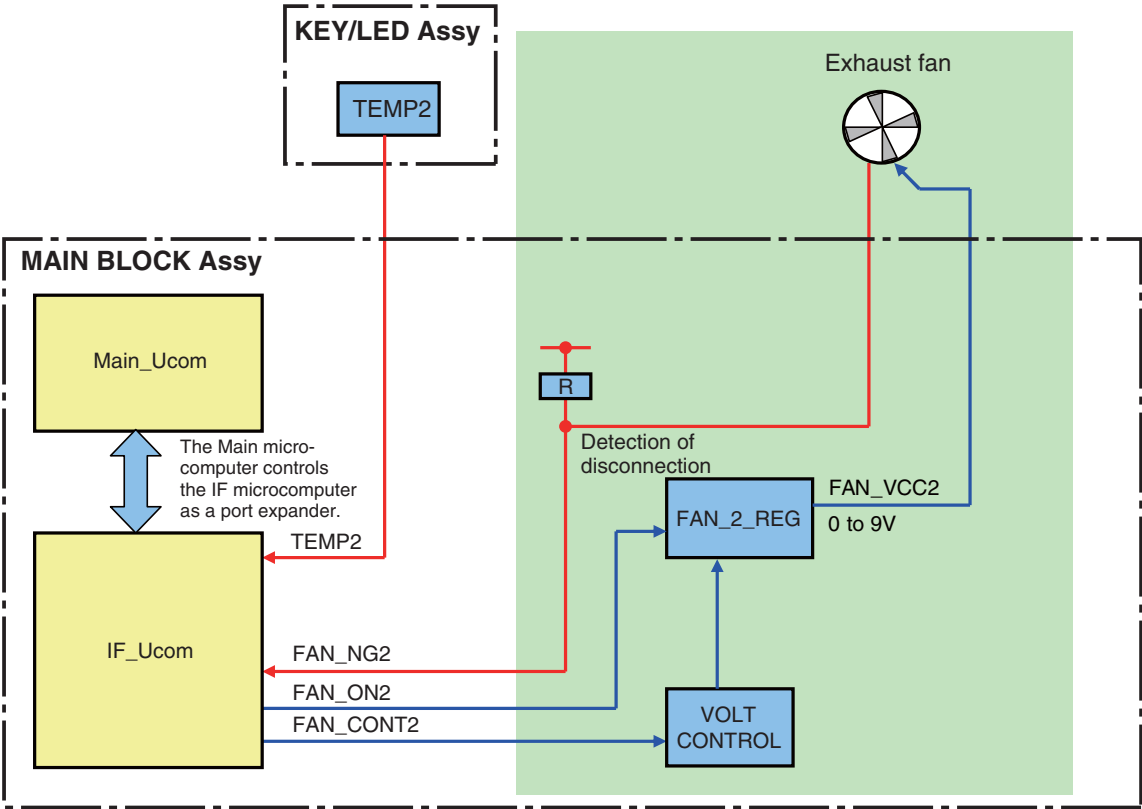
(The proportions, such as 4:4:4 and 4:2:2, represent those of the amount of data for video signal components. For example, as for color difference 4:4:4, the proportion of the amount of data as for Y, Cb, and Cr is 4:4:4.)

It is required to make the settings of the PDP according to the settings of the output equipment. For usual operation, however, set them to AUTO. If the color is inappropriate, make the settings manually.

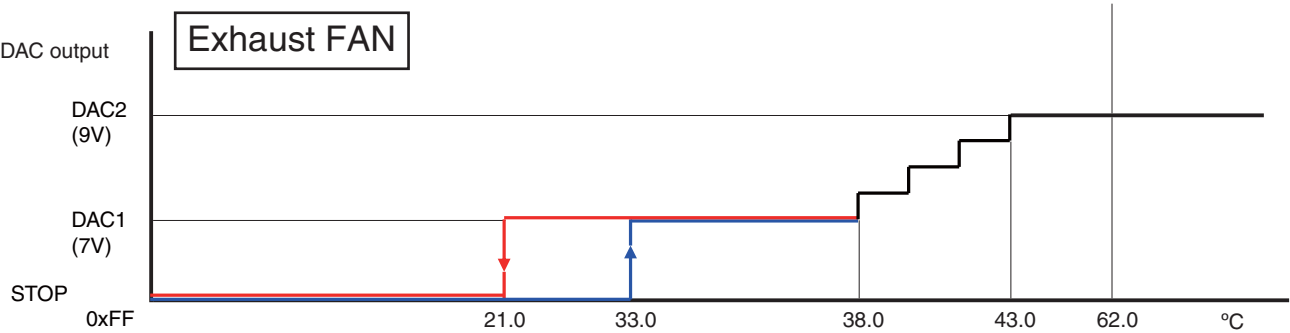
In the HDMI system, video signals are coded at 24 bits per pixel and transmitted as a series of 24-bit pixels. In a case of color difference 4:4:4, Y, Cb, and Cr use 8 bits each. In a case of color difference 4:2:2, Y, Cb, and Cr use 12 bits each, but Cb and Cr are transmitted at a half sampling rate of Y. This unit is capable of processing the upper 10 bits out of 12 bits of video data. Recent high-end DVD players, such as Pioneer DV-79AVi, are capable of outputting 10-bit color-difference signals. In general, it is said that picture quality for color difference 4:2:2 format is assumed to be higher, because human eyes are more sensitive to luminance than to colors. In the case of RGB4:4:4, R, G, and B use 8 bits each.

[1] SPECIFICATION OF THE FAN CONTROL

■ Block diagram



■ Operation specifications

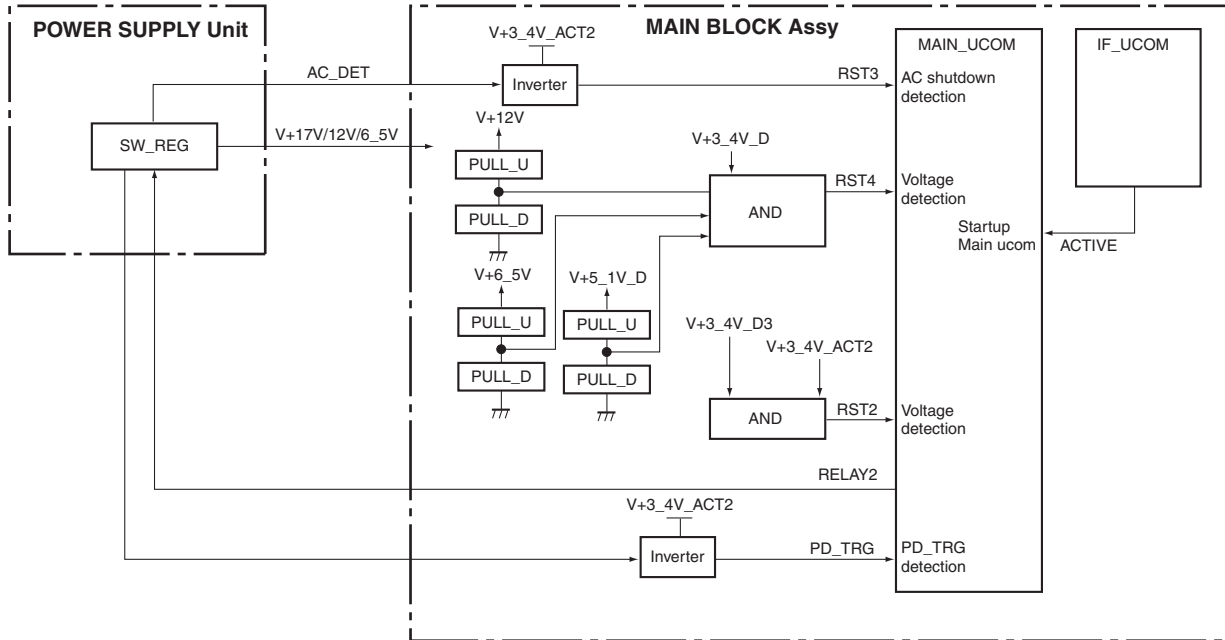


- Notes:**
- The operating temperature of the fan is different from the ambient temperature, because the sensor temperature is read by the microcomputer.
 - The fan may not start rotating until the internal temperature of the unit reaches a certain level, such as immediately after the unit is turned on.
 - When the temperature rises, the sensor voltage of TEMP2 decreases.
 - When the voltage of the DAC output for exhaust FAN decreases, rotation speed of FAN rises.

[2] PROCESSING IN ABNORMALITY

Power supply and DC-DC converter

● Circuit configuration

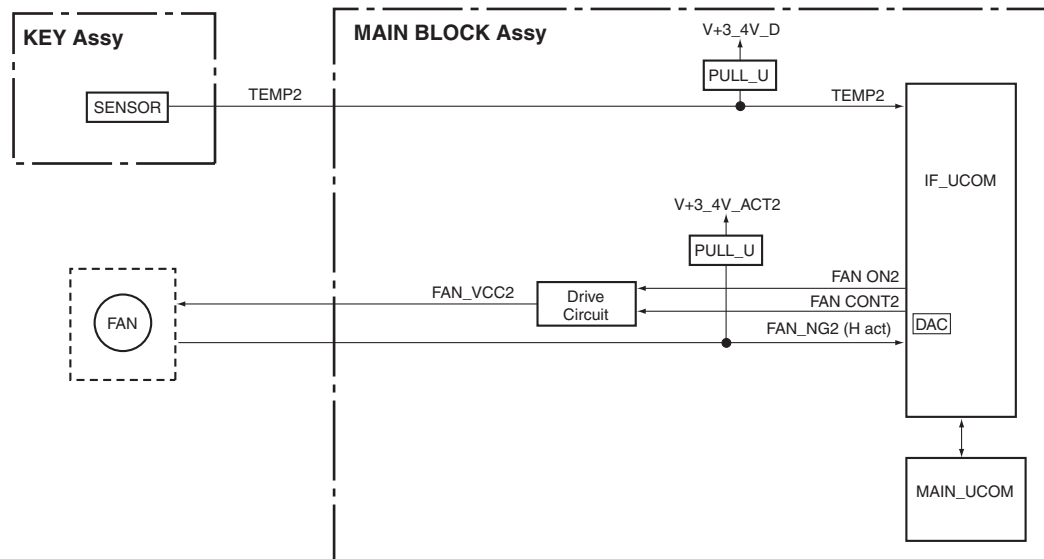


● Specifications for port monitoring

Port Name	SD/PD Indication	Determination Condition	Monitoring conditions	Operation
RST2	ASIC power (M-DCDC)	Shutdown occurs when the signal is "L." for 5 sec after PSW1 is ON. or for 2 sec while the unit is ON.	<ul style="list-style-type: none"> Panel screen ON (RST4 = H and PSW1 = H) While awaiting restoration of RST2 (RST2 = L) 	Shutdown occurs immediately Blue LED flashes 13 times.
RST3	—	—	Excepting passive standby	If "RST3 = H" (AC_OFF) is detected under the monitoring conditions, a power-off process starts. Monitoring of the RST3 port is continued, and monitoring of other ports is interrupted. Communication is controlled only by the IF microcomputer. The port outputs are set as specified. If the signal at the RST3 port continues to be H after 30 mS of waiting, monitoring is continued. If RST3 is L, a restoration process starts according to the latest power-on/-off status.
RST4	MAIN power (RELAY)	Shutdown occurs if the signal is "L." for 5 sec after RELAY2 is ON. or for 2 sec while the unit is ON or in Functional STB.	RELAY2 = ON (High)	Shutdown occurs immediately Blue LED flashes 13 times.
PD_TRG	VCC power (MR-PWR)	Shutdown occurs when the signal is continuously "L" for 30msec * 3 times after RELAY2 is ON.	<ul style="list-style-type: none"> RELAY2 = ON Monitor it after 3 sec. 	Power-down occurs immediately Red LED flashes once.

Fan and temperature sensor

● Circuit configuration



● Specifications for port monitoring

Port Name	SD/PD Indication	Determination Condition	Monitoring conditions	Operation
FAN_NG2	FAN	Shutdown occurs when the signal is "H." 1 S * 3 times.	RST4 = H and FAN_ON2 = H (Monitoring starts 3 sec after the above conditions are established.)	Shutdown occurs immediately Blue LED flashes 10 times.
TEMP2	High temperature at MR	Shutdown occurs if any values equal to or greater than minimum to require a shutdown are detected. 1 S * 3 times.	RST4 = H (Monitoring starts 1 sec after the above conditions are established.)	In the Panel screen ON: Shutdown occurs after the warning indication is displayed for 30 sec. In the Functional STB: Shutdown occurs immediately Blue LED flashes 11 times.

[3] HOW TO OPERATE THE MEDIA RECEIVER SEPARATELY

● Necessary items for operation

- Media Receiver
- DP-to-HDMI conversion jig: GGF1627 (with the AC adaptor)
AC adaptor INPUT: 100 V to 240 V, 50/60 Hz, 0.3 A
OUTPUT: DC 6 V, 1.8 A $\ominus \text{---} \bullet \text{---} \oplus$
- Monitor or TV (with which an image with resolution of 1920 × 1080 p, 60 Hz can be displayed, with HDMI input)
Note: When checking with DVI monitor, setting change of this jig is required.
- DP cable (GGP1117) and HDMI cable
- G8 or G9 remote control unit (in case of controlling by remote control unit)
- PC and RS-232C straight cable (in case of controlling by PC)
- HDMI -DVI cable (in case of connecting with DVI monitor)

● Connection

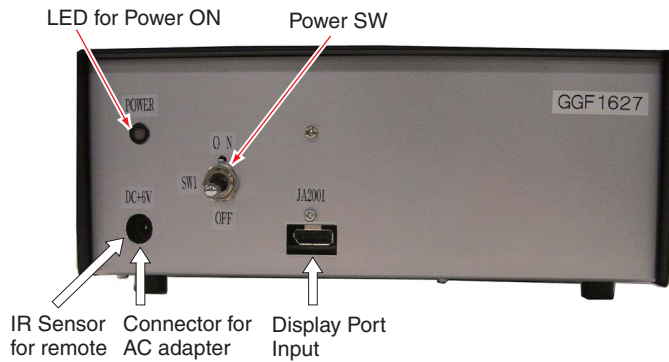


Fig.1 DP - HDMI Conversion tool (Front side)

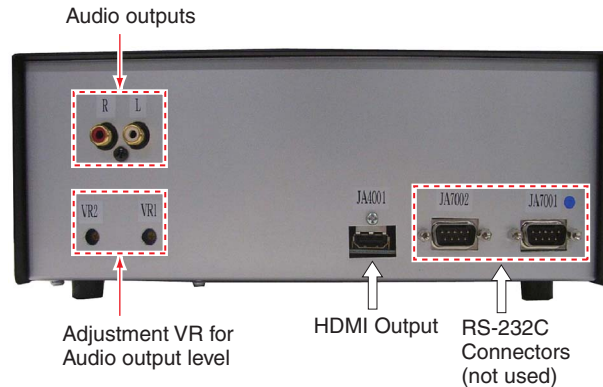


Fig.2 DP - HDMI Conversion tool (Rear side)

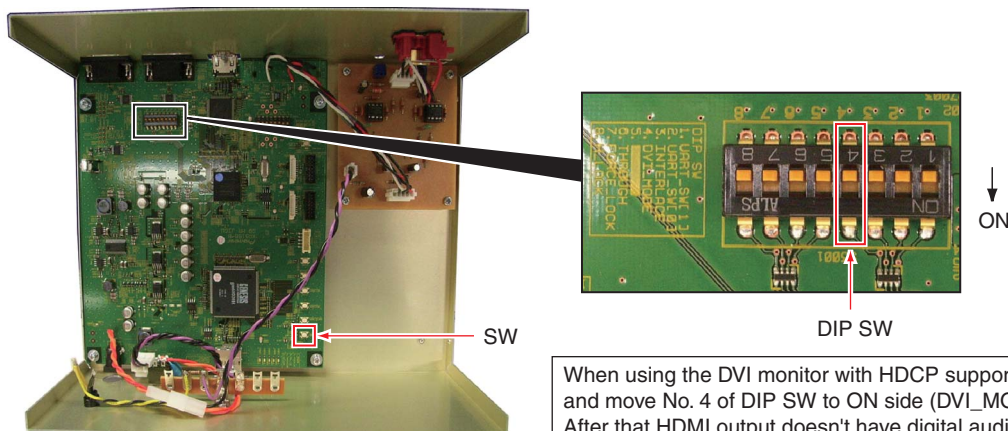


Fig.3 DP - HDMI Conversion tool
DIP SW Setting (output mode setting for HDMI connector)

● Preparation

- Set the MR from System Operation mode to Standalone Operation mode.
The MR is normally set to System Operation mode. If the MR is turned on in this mode, it cannot be operated properly.

To change to Standalone Operation mode, proceed as follows:

[With an RS-232C command]

1. Turn the MR on.
2. In this state, send the MRMS01 command via RS-232C ports.
3. Turn the MR off.

When the MR is turned on next time or after, it will be in Standalone Operation mode.

[With the keys on the MR]

1. Set the MR to Standby mode.
2. Press and hold the INPUT key of the MR pressed for at least 5 seconds.
(This step is for giving a startup trigger in a case where the MR was in Passive Standby mode.)
3. Within 5 seconds after the INPUT key is released, press and hold the CHANNEL - key of the MR for at least 10 seconds.
4. After the modes are changed, the red LED flashes twice then is lit (the unit enters Normal Standby mode).
5. Turn the unit off.

When the MR is turned on next time or after, it will be in Standalone Operation mode.

● Operation

After the setting in Preparation is completed, turn the units on in the following order then perform analysis:

1. Turn the monitor or TV on. (Set the input mode to HDMI.)
2. Turn the DP-to-HDMI conversion jig on.
3. Turn the MR on.

If no image is displayed on the monitor or TV after the MR is turned on, press and hold the switch on the DP-to-HDMI conversion jig for about 1 sec.

● How to control the MR

- With the remote control unit:

The infrared receiver (IR) sensor for remote control unit is placed inside of the jig. Please point the remote towards the AC adaptor connector on the jig.

Unlike normal products, sensor reception of this tool is not so sensitive due to reduce interference with another Pioneer Plasma TV.

Please keep the distance between the remote control unit and the sensor less than 15cm.

- With RS-232C commands:

Connect a PC to the MR via their RS-232C ports and send RS-232C commands from the PC. (Baud rate: 9600 bps)

A

● After analysis is finished

After analysis in Standalone Operation mode is finished, before returning the MR to the customer, be sure to return the unit to System Operation mode, as shown in the procedures below.

If it remains in Standalone Operation mode, when it is connected with the customer's monitor, the monitor will detect a connection error and not operate properly, and no image will be displayed.

To set the MR to System Operation mode, proceed as follows:

[With an RS-232C command]

1. Turn the MR on.
2. Send the MRMS00 command via RS-232C ports.
3. Turn the MR off.

When the MR is turned on next time or after, it will be in System Operation mode.

4. Connect the MR directly with the monitor and check that they operate properly.

[With the keys on the MR]

1. Set the MR to Standby mode.
2. Press and hold the INPUT key of the MR pressed for at least 5 seconds.
(This step is for giving a startup trigger in a case where the MR was in Passive Standby mode.)
3. Within 5 seconds after the INPUT key is released, press and hold the CHANNEL + key of the MR for at least 10 seconds.
4. After the modes are changed, the red LED flashes twice then is lit (the unit enters Normal Standby mode).
5. Turn the unit off.

When the MR is turned on next time or after, it will be in Standalone Operation mode.

● Products whose proper operation has been proved when HDMI connection is performed with this MR

Model Number	Manufacturer	Built-in Audio AMP
PDP-5000EX	Pioneer	○ (SP is required)
G8	Pioneer	○ (SP is required except 42 inch)
FP241WJ	BenQ	× (External audio amp and SP is required)
3008WFP	DELL	× (External audio amp and SP is required)
HD2441W	EIZO NANAO	× (External audio amp and SP is required)

● Attention point for audio volume

Audio output level is connected with MR volume level. If VR level of a MR is normal (around 10 - 15) and displayed HDMI TV or audio AMP is not so high level, sound level is very low. Please turn up the volume to appropriate level either or both units.

In case of turning up volume of MR to very high level during testing, turn down it to normal level and then turn off the unit. Otherwise when connecting the MR with panel, very loud sound is output from speakers and it might be a danger.

● Attention point when using another Pioneer Plasma TV

Please pay attention to interference of IR signal when using Pioneer plasma TV as HDMI monitor.

If remote signal is also received to Pioneer plasma TV when operating MR with this tool and remote, you might confuse of which unit is controlled by the remote.

The following methods are some of suggestions to control only MR with the conversion tool.

Using the remote control unit and the conversion tool (AC adaptor connector) as nearly as possible hiding remote sensor of the plasma TV temporally.

● Setting Method to connect with DVI monitor with HDCP support (DVI mode)

1. Open bonnet with power off condition.
2. Refer to Fig. 3, move the DIP SW No. [4] to ON side.
After this setting, DVI mode signal is output from HDMI output connector of HDMI.

Note: 1. Some of DVI monitors might not display output signal from this conversion tool.
2. Output signal does not contain digital audio signal.

3.7 LIST OF RS-232C COMMANDS

RS-232C command list

Command Name		Function	Last Memory	Effective only in Factory mode	Remarks
A					
AMT	S00	Audio mute OFF			
	S01	Audio mute ON			
C					
CHN	FWD	Changing tuner preset channel (1 step forward)			
	REV	Changing tuner preset channel (1 step reverse)			
CHM		Clearing data of the hour meter		●	Last memory is performed to the panel side.
CHR		Clearing data of the hour meter of MTB/MR side			Clear the hour meter of screen display of MAIN NG.
CNG		Clearing data of the SD history of MTB/MR side			
D					
DPT		Rewriting the Display Port Tx			
DW*		To subtract * to the adjustment value (* = 0 to 9, subtract 10 with DW0 and set to minimum value with DWF)			
F					
FAN		Factory mode: OFF		●	
FAY		Factory mode: ON			
FST	S41	Set each memory setting of MR side to the General model.		●	
	S42	Set each memory setting of MR side to the China model.		●	
I					
INA	***	Switching the terrestrial analog signal, direct tuning (***: channel number)	MAIN		
		Switching the terrestrial analog signal (Channel is in the last.)	MAIN		
INH		Switching the Home Media Gallery / Home Gallery			
INP	S01	Input: INPUT1	MAIN		
	S02	Input: INPUT2	MAIN		
	S03	Input: INPUT3	MAIN		
	S04	Input: INPUT4	MAIN		
	S05	Input: INPUT5	MAIN		
	S06	Input: INPUT6	MAIN		
	S07	Input: INPUT7 (PC)	MAIN		
M					
MRM	S00	Setting the mode to normal operation	MAIN	●	
	S01	Setting the mode to standalone operation	MAIN	●	
MST	S00	Display one screen			
	S01	PsideP (Main size: normal)			
	S02	PinP (Right down)			
	S03	PinP (Right up)			
	S04	PinP (Left down)			
	S05	PinP (Left up)			
	S08	SWAP (Exchanging sub-screen)			
O					
OSD	S00	OSD setting: OFF	MAIN		
	S01	OSD setting: ON	MAIN		
P					
POF		Power: OFF	MAIN		
PON		Power: ON	MAIN		
PUC	S00	PURE CINEMA: OFF	MAIN	●	
	S01	PURE CINEMA: Standard	MAIN	●	
	S02	PURE CINEMA: Advance	MAIN	●	
	S03	PURE CINEMA: Smooth	MAIN	●	
Q					
QMT		Acquiring temperature of MTB/MR side and Fan speed			
QNG		Acquiring shutdown information of MTB/MR side			
QS1		Acquiring unit data, such as the software version			
QSE		Acquiring unit data, such as the software version of MTB/MR side (specific destination)			

A

B

C

D

E

F

Command Name		Function	Last Memory	Effective only in Factory mode	Remarks
S					
SDF	S00	SRS DEFINITION: OFF			
	S01	SRS DEFINITION: DEFINITION1			
	S02	SRS DEFINITION: DEFINITION2			
	S03	SRS DEFINITION: DEFINITION3			
SML	***	Adjustment of the side mask level	MAIN	●	
SRS	S00	SRS: OFF			
	S01	SRS: SRS1			
	S02	SRS: SRS2			
	S03	SRS: SRS3			
SZM	S00	Setting the screen size to Dot by Dot	MAIN		
	S01	Setting the screen size to 4 :3	MAIN		
	S02	Setting the screen size to FULL or FULL 1080i	MAIN		
	S03	Setting the screen size to ZOOM	MAIN		
	S04	Setting the screen size to CINEMA	MAIN		
	S05	Setting the screen size to WIDE or WIDE1	MAIN		
	S06	Setting the screen size to FULL 14:9	MAIN		
	S07	Setting the screen size to CINEMA 14:9	MAIN		
	S11	Setting the screen size to AUTO	MAIN		
	S12	Setting the screen size to WIDE2	MAIN		
T					
TBS	S00	TRUBASS: OFF			
	S01	TRUBASS: TRUBASS1			
	S02	TRUBASS: TRUBASS2			
	S03	TRUBASS: TRUBASS3			
U					
UP*		To add * to the adjustment value (* = 0 to 9, add 10 with UP0 and set to maximum value with UPF)			
V					
VOL	UP*, DW*, ***	To adjust the volume			Use this command by designating the adjustment value *** (=000 to 060).
Z					
ZME	***	Initializing the video EEPROM data of the MTB/MR side		●	

3.8 DETAILS OF RS-232C COMMANDS

Following items are same as the KRP-M01/WYSIXK5.

- [1] QS1 (Software Version Information of the Microcomputer)
- [3] QMT (STATUS INFORMATION OF MTB/MR SECTION
- [4] QNG (SHUTDOWN INFORMATION OF MTB SECTION)
- [5] FAY/FAN (ADJUSTMENT COMMANDS PERMISSION/PROHIBITION)

[2] QSE (DESTINATION PECULIAR INFORMATION)

Induce it peculiar, individual information is acquired.

Command Format	Effective Operation Modes	Function	Remarks
[QSE]	Every time	Output of status	Return data: 3 (ECO) + 32 (DATA) + 2 (CS) = 37 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QSE
1	Reserved	8 byte	*****
2	User setting password	4 byte	1234
3	DP Tx firmware version	16 byte	123456789ABCDEFGH
4	DP Tx hardware version	4 byte	ABCD
CS	Check Sum	2 byte	13

4. SERVICE FACTORY MODE

The following items in the service manual of KRP-M01/WYSIXK5 are not applicable to this model.

A DETAILS OF THE FACTORY MENU

[5] INITIALIZE

[5-3] DTB SERVICE MENU (+)

DIGITAL TUNER SERVICE MENU

[1] REMOTE CONTROL CODE IN DIGITAL TUNER SERVICE MENU

[2] HIERARCHICAL TABLE OF DIGITAL TUNER SERVICE MENU

[3] DIGITAL TUNER SERVICE MENU SCREEN

[4] HOME MEDIA GALLERY SCREEN

B [5] DIGITAL SCREEN

[6] SATELLITE SCREEN

[7] SOFTWARE VERSION SCREEN

4.1 OUTLINE OF THE SERVICE FACTORY MODE

Following items are same as the KRP-M01/WYSIXK5.

C

[1] SERVICE FACTORY MODE TRANSITION CHART

[2] HOW TO ENTER/EXIT SERVICE FACTORY MODE

[3] FUNCTIONS WHEN ENTERING THE SERVICE FACTORY MODE

[5] PDP SERVICE REMOTE CONTROL

D

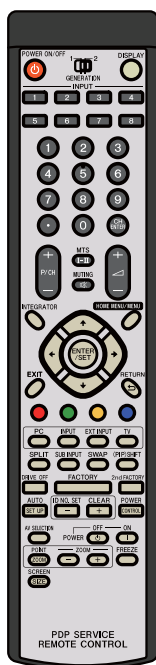
E

F

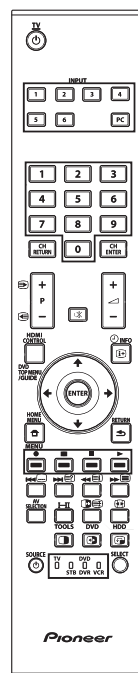
[4] REMOTE CONTROL CODE IN SERVICE FACTORY MODE

Remote Control Keys	Basic Functions	Remarks
MUTING	Switching the main items.	Shifting to the next main item (top).
↓ (DOWN)	Switching the subtitled items.	Shifting downward to the next subtitled item.
↑ (UP)	Switching the subtitled items.	Shifting upward to the next upper layer.
← (LEFT)	Decreasing the adjustment value.	Decreasing the adjustment value.
→ (RIGHT)	Increasing the adjustment value.	Increasing the adjustment value.
ENTER/SET	Switching the layers.	Shifting downward or upward to the next lower or upper layer.
INPUT	Selecting INPUT.	Shifting the INPUT to the next function.
INPUTxx	Selecting INPUT.	Switching the INPUT to xx. (xx=1 to 6)
CH+/P+	Increasing the channel number.	
CH-/P-	Decreasing the channel number.	
Numeric Keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF.	Turning the power off.
FACTORY	Factory OFF (Factory mode)	In Factory mode, turning Factory mode off.
	Factory ON (Non-Factory mode).	In Non-Factory mode, turn Factory mode on.
HOME MENU	Menu ON.	In Factory mode, turn Factory mode off.
VOLUME+	Volume UP.	Increasing 10 the adjustment value. (PANEL FACTORY)
VOLUME-	Volume DOWN.	Decreasing 10 the adjustment value. (PANEL FACTORY)
DRIVE OFF (Note1)	Drive Mode OFF.	Turning Drive mode off.
INTEGRATOR	INTEGRATOR MENU ON.	Enter INTEGRATOR MODE.

(Note 1) When ten seconds have passed since the [DRIVE OFF] key was pressed at the standby, it becomes invalid.
Please press [POWER] key from the [DRIVE OFF] key pressing within ten seconds when you do power supply ON while driven OFF.



PDP service
remote control



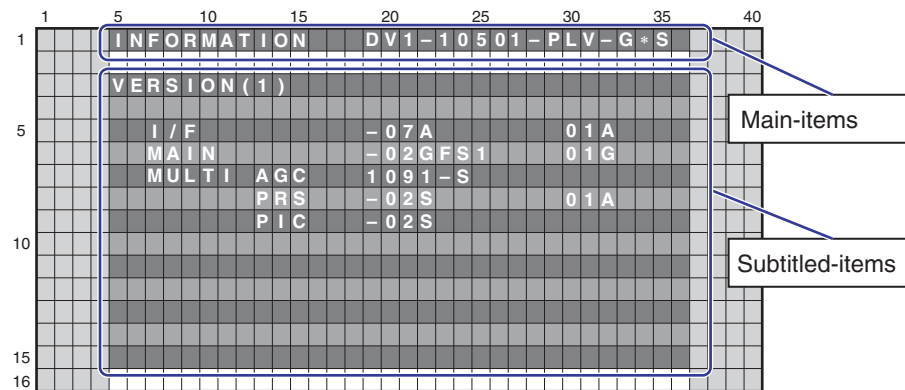
Supplied
remote control

[6] FACTORY HIERARCHICAL TABLE

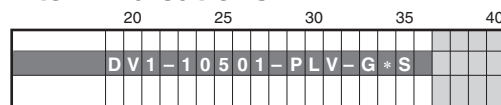
Large Item			Variable / Adjustment Range	Remarks
	Middle Item	Small Item		
4.2 [1] INFORMATION				
	[1-1] VERSION (1)			
	[1-2] VERSION (2)			
	[1-3] VERSION (3)			
	[1-4] MAIN NG	CLEAR <=>	NO <=> YES	
	[1-5] TEMPERATURE			
	[1-6] HOUR METER	CLEAR <=>	NO <=> YES	
	[1-7] HDMI SIGNAL INFO 1			
	[1-8] HDMI SIGNAL INFO 2			
	[1-9] VDEC SIGNAL INFO 1			
	[1-10] VDEC SIGNAL INFO 2			
4.2 [2] PANEL FACTORY (+) (*1)				
	[2-1] PANEL INFORMATION			
	[2-2] PANEL WORKS			
	[2-3] POWER DOWN			
	[2-4] SHUT DOWN			
	[2-5] PANEL-1 ADJ (+)			
	[2-6] PANEL-2 ADJ (+)			
	[2-7] PANEL FUNCTION (+)			
	[2-8] ETC (+)			
	[2-9] RASTER MASK SETUP (+)			
	[2-10] PATTERN MASK SETUP (+)			
	[2-11] COMBI MASK SETUP (+)			
4.2 [3] PANEL MAIN FACTORY (+) (*1)				
	[3-1] PM NG INFO			
	[3-2] PM STATE INFO			
	[3-3] DP_RX INFO			
	[3-4] PM_SETUP (+)			
4.2 [4] OPTION				
	[4-1] CH PRESET <=>		DISABLE <=> ENABLE	Exclusively used for production line
	[4-2] AFT <=>		DISABLE <=> ENABLE	Exclusively used for production line
	[4-3] SYNC DET (+)			for the technical analysis
	[4-4] CTI (+)			for the technical analysis
4.2 [5] INITIALIZE				
	[5-1] SIDE MASK LEVEL (+)	SIDE MASK LEVEL <=>		
	[5-2] FINAL SETUP	DATA RESET <=>	NO <=> GENERAL <=> CHINA	
	[5-3] Wide XGA AUTO <=>		DISABLE <=> ENABLE	for the technical analysis
	[5-4] AUTO ADJUST. <=>	AUTO ADJUST. <=>	NO <=> YES	

(*1): For details on the setting items, refer to the Service manual of the PLASMA DISPLAY (KRP-600P, KRP-500P).

[7] INDICATIONS IN SERVICE FACTORY MODE



Main-item indications



① Input function

Input Functions	OSD
DV 1 to 6	DV 1 to 6
Terrestrial Wave (Analog)	AIR
Cable (Digital)	CBD
Home Gallery	HG
PC	PC

② SIG mode and Screen size

Note: See SIG-Mode Tables. (See next page.)

③ Color system and Signal type

Color System and Signal Type	OSD	
	At Composite Input	At S-connector Input
NTSC	NTV	NTS
PAL	PLV	PLS
PAL M	PMV	PMS
PAL N	PNV	PNS
PAL 60	P6V	P6S
SECAM	SCV	SCS
4.43 NTSC	4NV	4NS
BLACK/WHITE	BWV	BWS
Y/CB/CR	CBR	
Y/PB/PR	PBR	
RGB	RGB	
Digital Video signal	DIG	

④ Option (Destination, Panel Generation, etc.)

Options	OSD
KRP-500P/LFTXJ	G*S
KRP-500P/WAXJ5	G*S
KRP-600P/WAXJ5	

A

② SIG Mode and Screen size (by User is displayed)

1st and 2nd characters : Resolution of the input signal

3rd and 4th characters : Refresh rate of the input signal

5th character : Selection of the screen size

B

■ Input signal mode table for video signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.750
	60	SDTV*525i	60.000	15.750
20	50	SDTV*625p	50.000	31.500
	60	SDTV*525p	60.000	31.500
30	50	HDTV*1125i	50.000	33.750
	60	HDTV*1125i	60.000	33.750
40	50	HDTV*750p	50.000	45.000
	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000
	50	HDTV*1125p	50.000	56.250
	60	HDTV*1125p	60.000	67.500

Fv: Vertical Frequency, Fh: Horizontal Frequency

C

■ Input signal mode table for PC signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
C1	70	720 x 400	70.087	31.469
C2	60	640 x 480	59.940	31.469
C4	60	800 x 600	60.317	37.879
C6	60	1280 x 720	60.000	44.800
C7	60	1024 x 768	60.004	48.363
C9	60	1360 x 768	60.015	47.712
D6	60	1280 x 1024	60.000	64.000

Fv: Vertical Frequency, Fh: Horizontal Frequency

D

■ Current selection of the screen size

5th Character	GUI Notation	VIDEO	PC	Remarks
0	DOT BY DOT	●	—	
1	4:3	●	●	
2	FULL	●	●	
3	ZOOM	●	—	
4	CINEMA	●	—	
5	WIDE	●	—	
6	FULL 14:9	●	—	
7	CINEMA 14:9	●	—	
9	WIDE1	●	—	
A	WIDE2	●	—	

●: supported, —: unsupported

F

4.2 DETAILS OF THE FACTORY MENU

[1] INFORMATION

■ Operation items

No.	Function	Content	RS-232C Command
[1-1]	VERSION (1)	The Flash memory versions for each device are displayed.	QS1
[1-2]	VERSION (2)	The Flash memory versions for each device are displayed.	QSE
[1-3]	VERSION (3)	The Flash memory versions for each device are displayed.	QSB
[1-4]	MAIN NG	The Shutdown NG information and Event Times in the MTB section are displayed.	QNG
[1-5]	TEMPERATURE	The present temperature and the FAN rotating status are displayed.	—
[1-6]	HOURLY METER	The accumulation power ON count of the panel is displayed.	—
[1-7]	HDMI SIGNAL INFO 1	The status registers of HDMI receiver are displayed with hexadecimal.	—
[1-8]	HDMI SIGNAL INFO 2		
[1-9]	VDEC SIGNAL INFO 1	Display the signal information input to VDEC.	—
[1-10]	VDEC SIGNAL INFO 2		

[1-1] VERSION (1)

	1			5			10			15			20			25			30			35			40								
1					I	N	F	O	R	M	A	T	I	O	N		D	V	1	-	1	0	5	0	1	-	P	L	V	-	G	*	S
					V	E	R	S	I	O	N	(1)																			
5					I	/	F								-	0	7	A											0	1	A		
					M	A	I	N							-	0	2	G	F	S	1								0	1	G		
					M	U	L	T	I		A	G	C			1	0	9	1	-	S												
									P	R	S				-	0	2	S										0	1	A			
									P	I	C				-	0	2	S															
10																																	
15																																	
16																																	

Display Item	Meaning	Display Example (Program)	Display Example (Boot)
I/F	I/F microcomputer	-07A	01A
MAIN	Main microcomputer	-02GFS1	01G
MULTI AGC	AGC data of Multi processor	1091-S	
MULTI PRS	Program of Multi processor	-02S	01A
MULTI PIC	Picture quality data of Multi processor	-02S	

[1-2] VERSION (2)

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Display Item	Meaning	Display Example
PASSWORD	User setting password	1234
DP TX	DP TX Firmware Version	123456789ABCDEFG
DP TX HARD	DP TX Hardware Version	2C13

[1-3] VERSION (3)

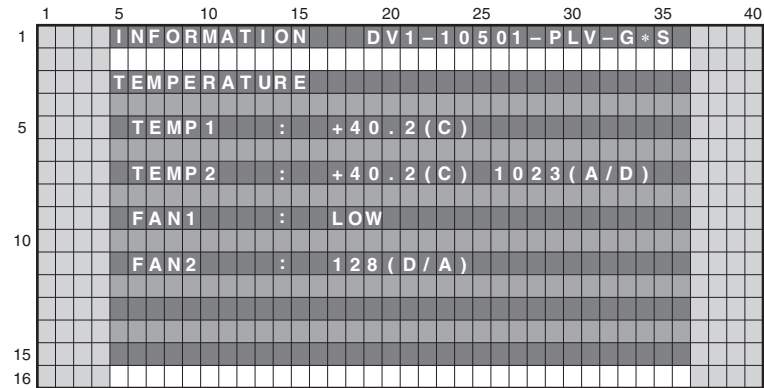
1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Display Item	Meaning	Display Example (Program)	Display Example (Boot)
P_MAIN	Panel Main microcomputer	-02AS	01A
MODULE	Module microcomputer	-06A	01A
SEQ PRS	Program of the sequence processor	-03Y	01A
Display Item	Meaning	Display Example	
DP RX	DP RX Firmware Version	123456789ABCDEFG	
DP RX HARD	DP RX Hardware Version	2C12	
Display Item	Meaning		
PANEL INFO	It displays the generation of the panel, inchage and the type of the panel. For details on display values and settings, see "10: Panel Information" in "5.9 [1] QS1 (Software Version Information of the Microcomputer)" on the Service Manual of KRP-M01/WYSIXK5.		

[1-5] TEMPERATURE

A present temperature and the FAN rotation are displayed.

If either [←] key or [→] key is pressed, the display data is refreshed.



Display Item	Meaning
TEMP1	The temperature of the sensor on the panel side is displayed by the Centigrade (C).
TEMP2	The temperature conversion display is done with 10 bit the A/D input value of IF microcomputer. It is displayed by both the Centigrade (C) and 8 bit A/D value. Note: When temperature (C) of the sensor becomes more than a specified temperature, the shutdown start of processing.
FAN1	Although STOP, LOW, or HIGH may be displayed, they are meaningless. Ignore those displays.
FAN2	The value of the rotation state of FAN is displayed. During a rotation of FAN, 8bit D/A value output from IF microcomputer is displayed. It is displayed with OFF during a stop.

[1-6] HOUR METER

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Display Item	Meaning	Display Example
PANEL	HOURL METER of the panel	00151H 21M
P-COUNT	Accumulation power ON count of the panel	00000095 TIMES
SERIAL	Serial number of the Display (panel)	ABCDEFGHIJKLMNO

• MTB HOUR METER

In HOUR METER screen on Factory Menu, press the [ENTER/SET] key, and then it moves to the screen to clear MTB HOUR METER. (MTB HOUR METER is cleared only.)

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Operation:

- Even if [←] key or [→] key is pressed, {CLEAR <=> :YES} ↔ {CLEAR <=> :NO} is repeated.
- Selecting <NO> then pressing the ENTER/SET key will return the screen to the next higher layer, without doing anything.
- Selecting <YES> then holding the ENTER/SET key pressed for 5 seconds will clear the HOUR METER (HOUR METER while the MAIN NG screen is displayed) data that are managed in MR then return the screen to the next higher layer.

[1-7] HDMI SIGNAL INFO 1

	1	5	10	15	20	25	30	35	40
1									
5									
10									
15									
16									

Displays the input signal information of HDMI terminal

Display Item	Meaning
PWR5V	+5 V power detection (18 pin of HDMI terminal)
VSYNC	VSYNC detection
CKDT	Clock detection
SCDT	SYNC detection
DCRPT	HDCP decryption status
AUTH	HDCP authentication status
MODE	HDMI mode status
BIST	HDCP Key status (Always display it with "--".)
NVAL	N value
CTSVAL	CTS value
AKSV	Shadow AKSV value
BKSV	Shadow BKSV value
IT CNT	IT content (AVI info)
EXTCOL	Extension colorimetry (AVI info)
RGB QR	RGB range (AVI info)
PIXDEP	Number of pixel/bit

[1-8] HDMI SIGNAL INFO 2

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Displays input signal status of HDMI terminal

Display Item	Meaning
H RES	Number of horizontal pixels
V RES	Number of vertical lines
H DE	Number of effectively horizontal pixels
V DE	Number of effectively vertical lines
INTRL	Interlace (=INT) or progressive (=PRG)
V POL	VSYSN polarity
H POL	HSYSN polarity
AUDIO (first line)	Sampling frequency. (ex. DVD: 48kHz, CD: 44.1kHz) *1
AUDIO (second line)	Audio format PCM (PCM) or No PCM (no PCM)
AUDIO (third line)	Quantization bit
COL SP	Color space (AVI Info) 422 or 444 or RGB *2
COLMET	Colorimetry (AVI Info)
ASPECT	Aspect (AVI Info)
ACTIVE	Active format (AVI Info)
V FMT	Video format (AVI Info)
PIX RP	Pixel count
SOURCE (first line)	Vendor name of the emission device
SOURCE (second line)	Model name of the emission device

*1: Confirm if this item is displayed when the audio is not outputted.

*2: If may not match to the state of emission devices when the color is abnormal.

Display of HDMI FACTORY and correspondence of resolution

Please confirm the following items when the picture doesn't come out.

Input Signal	FACTORY Display				
	H RES	V RES	H DE	V DE	V FMT
480i (525i)@60	858	262 or 263	720	240	720x480i@60
480p (525p)@60	858	525	720	480	720x480p@60
1080i (1125i)@60	2200	562 or 563	1920	540	1920x1080i@60
720p (750p)@60	1650	750	1280	720	1280x720p@60
1080p (1125p)@60	2200	1125	1920	1080	1920x1080p@60
1080p (1125p)@24	2750	1125	1920	1080	1920x1080p@24
576i (625i)@50	864	312 or 313	720	288	720x576i@50
576p (625p)@50	864	625	720	576	720x576p@50
1080i (1125i)@50	2640	562 or 563	1920	540	1920x1080i@50
720p (750p)@50	1980	750	1280	720	1280x720p@50
1080p (1125p)@50	2640	1125	1920	1080	1920x1080p@50

A

B

C

D

E

F

[2] PANEL FACTORY (+)

■ Operation Items

No.	Function	Content	RS-232C
[2-1]	PANEL INFORMATION	——	——
[2-2]	PANEL WORKS	——	——
[2-3]	POWER DOWN	——	——
[2-4]	SHUT DOWN	——	——
[2-5]	PANEL-1 ADJ (+)	——	——
[2-6]	PANEL-2 ADJ (+)	——	——
[2-7]	PANEL FUNCTION (+)	——	——
[2-8]	ETC. (+)	——	——
[2-9]	RASTER MASK SETUP (+)	——	——
[2-10]	PATTERN MASK SETUP (+)	——	——
[2-11]	COMBI MASK SETUP (+)	——	——

Note: For details on the setting items, refer to the Service manual of the PLASMA DISPLAY (KRP-600P, KRP-500P).

[3] PANEL MAIN FACTORY (+)

■ Operation Items

No.	Function	Content	RS-232C
[3-1]	PM NG INFO	——	——
[3-2]	PM STATE INFO	——	——
[3-3]	DP_RX INFO	——	——
[3-4]	PM_SETUP (+)	——	——

Note: For details on the setting items, refer to the Service manual of the PLASMA DISPLAY (KRP-600P, KRP-500P).

[4] OPTION

Operation item

No.	Function	Content	RS-232C
[4-1]	CH PRESET <=>	Set the channel map for production line	SCP
[4-2]	AFT <=>	Set AFT of the Analog broadcasting	AFT
[4-3]	SYNC DET (+)	Set the synchronized signal detection of VDEC	——
[4-4]	CTI (+)	Set the synchronized signal detection of VDEC	——

[4-1] CH PRESET <=>

Exclusively used for production line.

[4-2] AFT <=>

Exclusively used for production line.

[4-3] SYNC DET (+)

Exclusively used for technical analysis (details omitted).

[4-4] CTI (+)

Exclusively used for technical analysis (details omitted).

[5] INITIALIZE

Operation item

No.	Function	Content	RS-232C
[5-1]	SIDE MASK LEVEL (+)	Configure the color of the side mask.	SML
[5-2]	FINAL SETUP	Initialize flash memorys on virgin product status	FST
[5-3]	Wide XGA AUTO <=>	Exclusively used for technical analysis.	----
[5-4]	AUTO ADJUST. <=>	Perform the auto-adjustment setting process	----

[5-1] SIDE MASK LEVEL (+)

1	5	10	15	20	25	30	35	40
1	INITIALIZE	DV1-10501-PLV-G*S						
5								
10								
15	SIDE MASK LEVEL (+)							
16								

To configure sidemask level (To adjust the values, input signal is required).

Display Item	Content	RS-232C
SIDE MASK LEVEL <=>	Adjust Side Mask level (Adjustable range: 000 to 255, Initial value: 115)	SML

Note: In this mode (SIDE MASK LEVEL), adjustment value cannot be changed with the VOLUME +/- keys.

[5-2] FINAL SETUP

1	5	10	15	20	25	30	35	40
1	INITIALIZE	DV1-10501-PLV-G*S						
5	FINAL SETUP							
10								
15	DATA RESET <=>	: NO						
16								

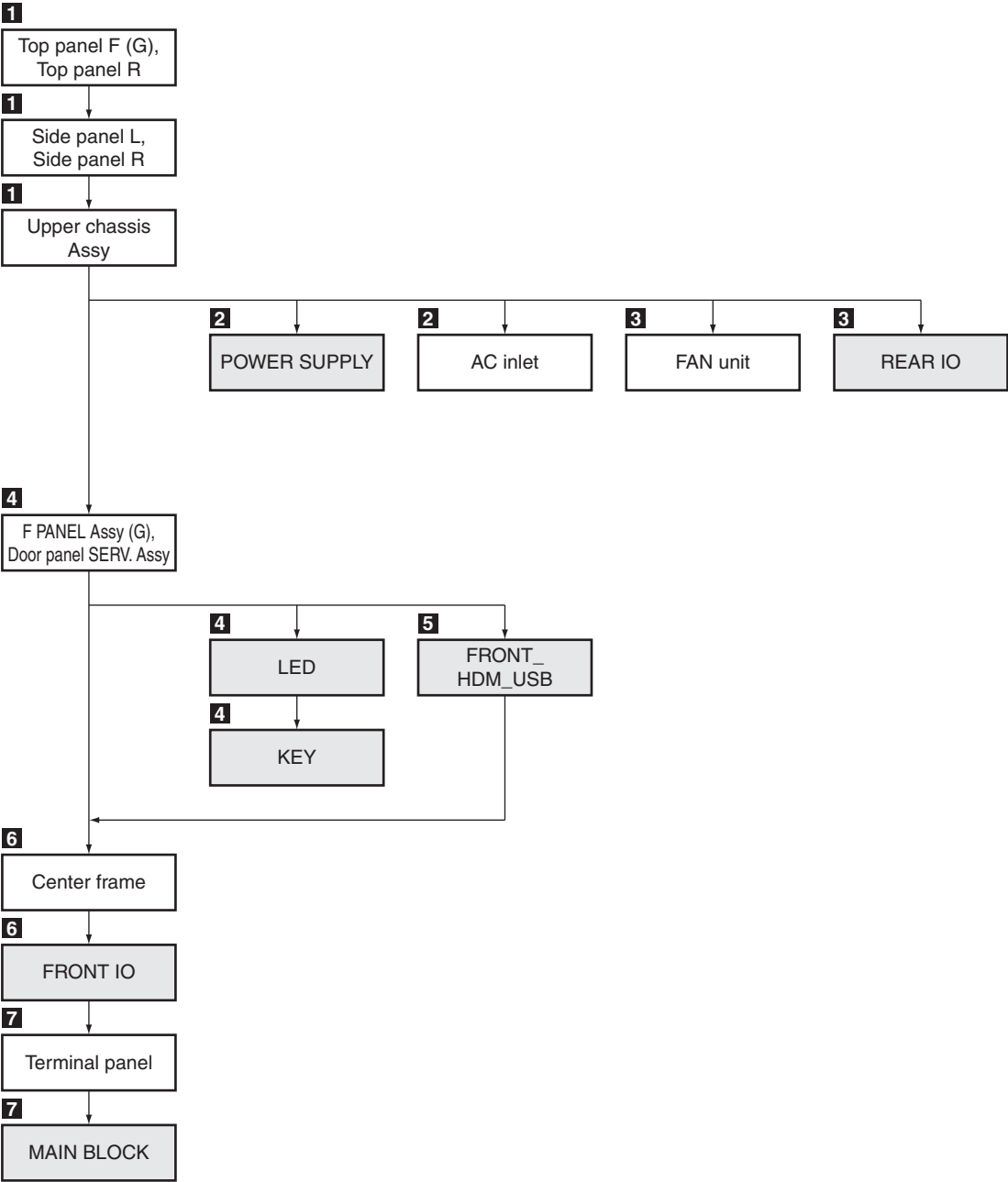
- To reset each memory values to factory default values. Factory command is "FST".
- When the configuration is set to <NO> and the [ENTER/SET] key is pressed, no action is taken and the menu returns to previous screen.
- When the configuration is set to <GENERAL> and the [ENTER/SET] key is pressed for 5 seconds, the reset action executes as the general model.
- When the configuration is set to <CHINA> and the [ENTER/SET] key is pressed for 5 seconds, the reset action executes as the China model.

**Be sure to disconnect and connect the AC cable after FINAL SETUP.
When replacing the MAIN BLOCK Assy, the FINAL SETUP is required.**

Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Flowchart of removal order for the main parts and boards

It is efficient to proceed with removal of the main parts and boards in the order shown in the chart below:



A

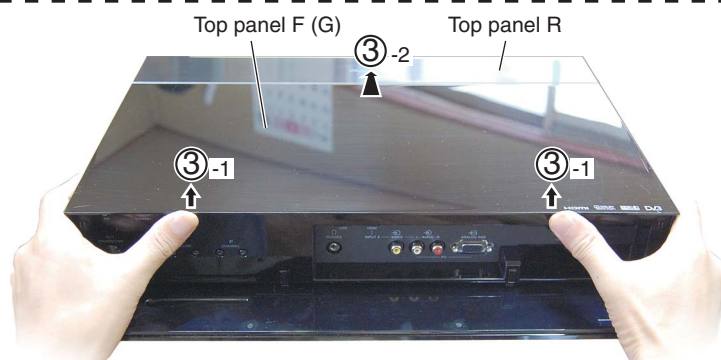
C

D

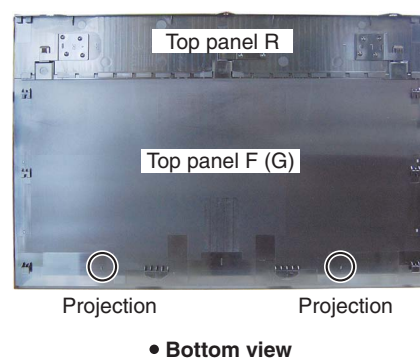
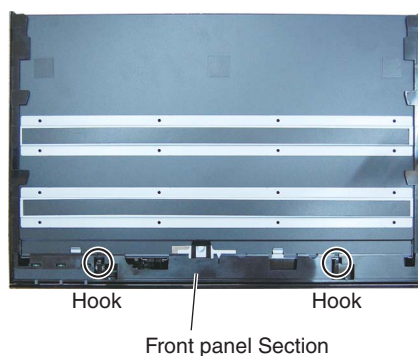
E

F

- ③ While pushing up at two places of the top panel using your thumbs, as shown in the photo below, to unhook the top panel, remove it by sliding it toward the rear panel.

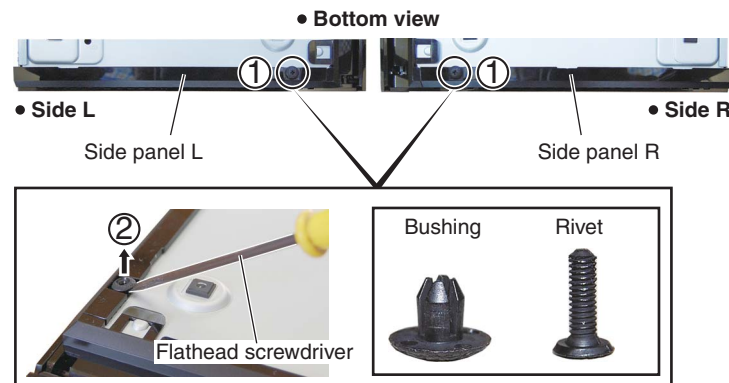


● Positions of the hooks

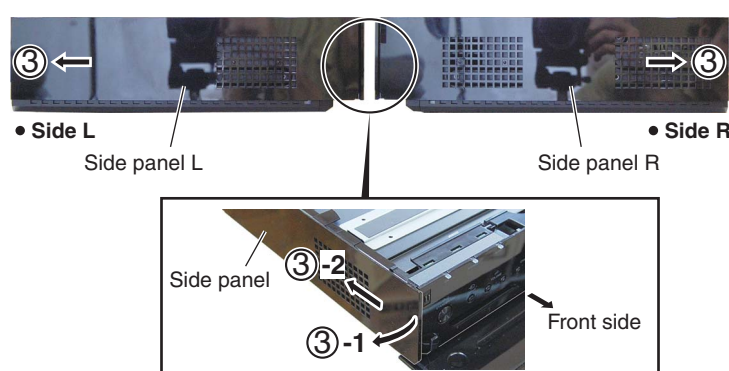


● Side panel L and R

- ① Remove the two rivets.
② Remove the two bushings, using a flathead screwdriver.



- ③ Remove the side panels L and R.
③-1 ③-2
Slide the side panel rearward, by stretching the front edge of the side panel outward, and remove it.



A

● Upper chassis Assy

- ① Remove the 14 screws. (BBZ30P060FTB)



● Rear view



● Side L

● Side R

B

● Screw tightening order

The other screws are random order.



C

D

- ② Remove the upper chassis Assy.

Upper chassis Assy

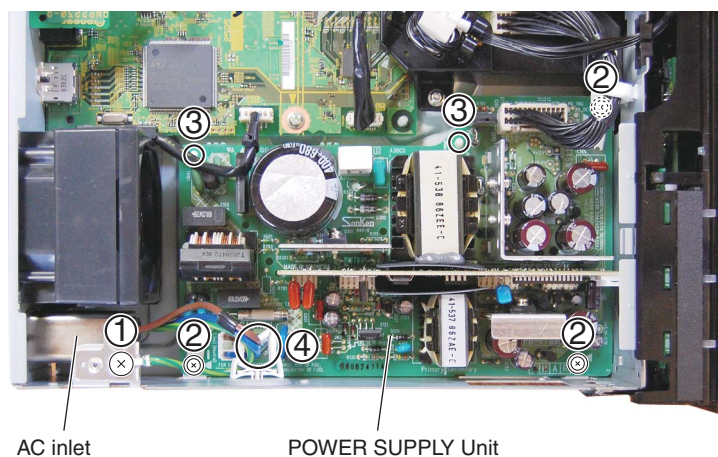


E

F

2 POWER SUPPLY Unit

- ① Remove the one screw. (BMP40P080FSN)
- ② Remove the three screws. (BBB30P080FSN)
- ③ Remove the two circuit board spacers.
- ④ Release the jumper wire.



- ⑤ Remove the two screws. (ABZ30P080FTB)
- ⑥ Remove the AC inlet.

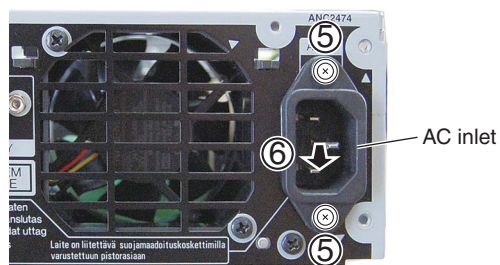
• An installation direction of the AC inlet



OK

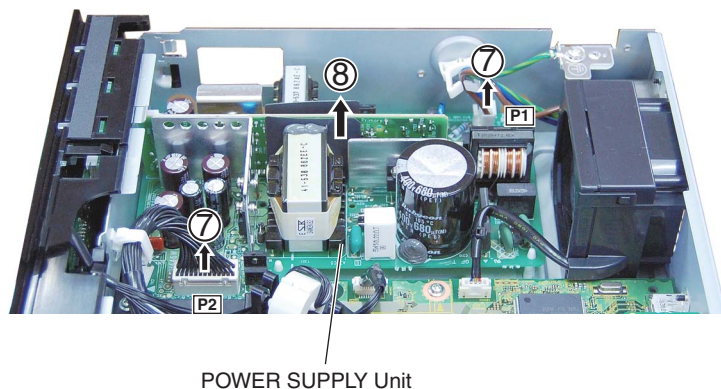


NG



• Rear view

- ⑦ Disconnect the two connectors.
- ⑧ Remove the POWER SUPPLY Unit.

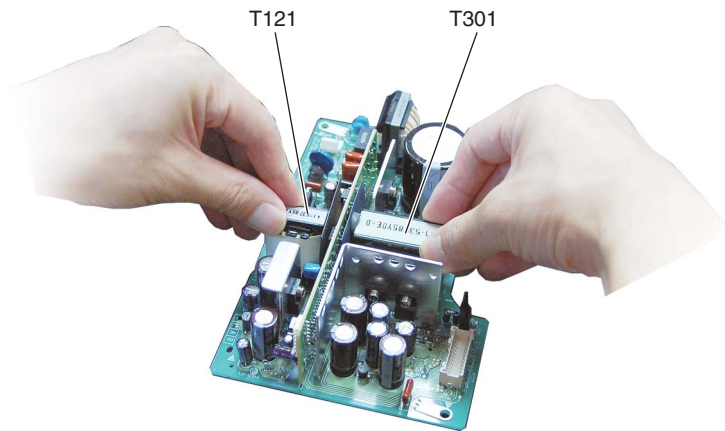


A

Notes on Removing the POWER SUPPLY Unit

● How to lift up the POWER SUPPLY Unit

When you remove the POWER SUPPLY Unit from the chassis, first lift the board by pinching T121 and T301 transformers with your fingers. When the board is lifted up to a certain height, hold it by hand. NEVER hold the board by the radiator that is adjacent to the transformer.

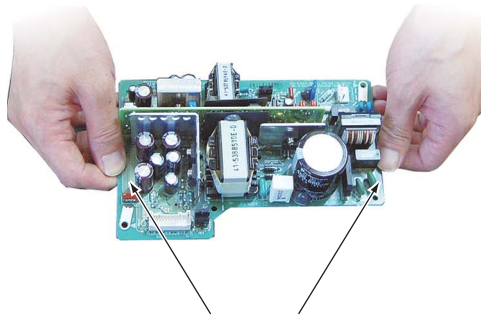


B

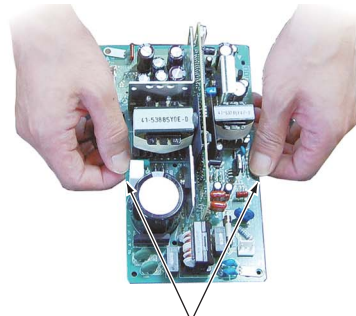
● How to hold the board after removing it from the chassis

C

The following two ways are recommended for holding the POWER SUPPLY Unit:



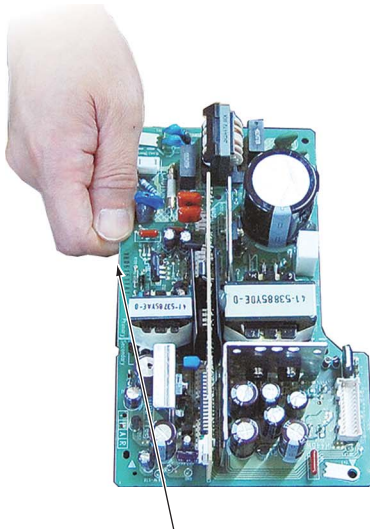
Hold at the center positions of both rims of the board.



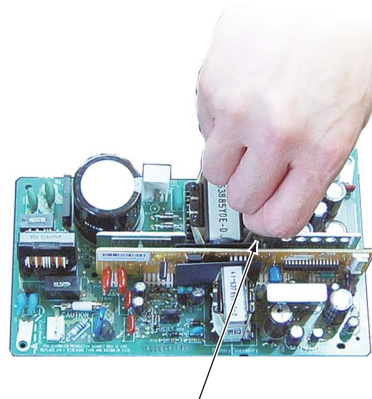
Hold at the center positions of both rims of the board.

D

Ways to be avoided:



NEVER hold a corner of the board with one hand.



NEVER hold the board by the radiator with one hand.

F

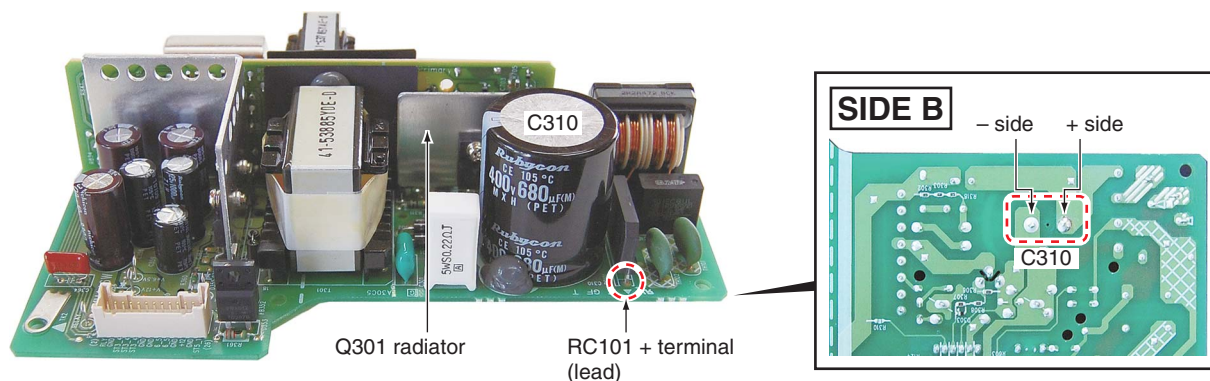
Note on Removing the POWER SUPPLY Unit from the Chassis and Method for Resetting Standby Power Latchup

For 3-5 minutes after the unit is turned off, residual electric charge remains in the C310 capacitor on the POWER SUPPLY Unit. Before removing the POWER SUPPLY Unit from the chassis, be sure to confirm that residual charge inside the POWER SUPPLY Unit has become sufficiently low. (Without forced discharge, residual charge that remains after 3-5 minutes will fall to one-tenth or less, which is still about 20 V. Therefore, even after the POWER SUPPLY Unit is removed, it is recommended to perform forced discharge on the POWER SUPPLY Unit, as shown below.)

For quick removal of residual charge, forced discharge is recommended, using two 220 ohm/10 W resistors (440 ohm/20 W).

How to remove the POWER SUPPLY Unit

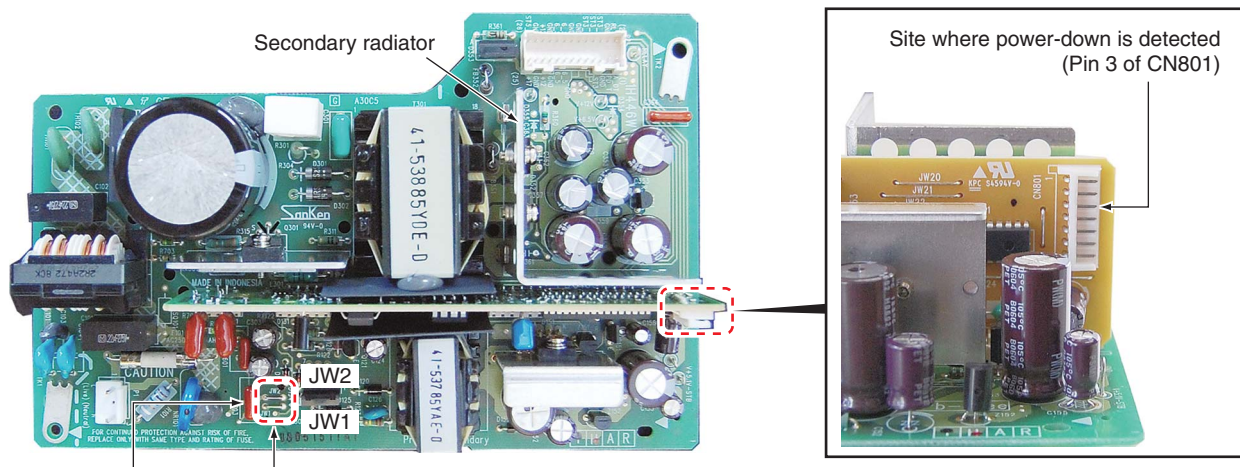
1. Make sure that the AC power cord is unplugged. Using a tester, check the voltage between the + terminal of RC101 bridge diode and Q301 radiator (equivalent to the voltage between two electrodes of C310).
2. Let the unit sit for more than 5 minutes until the voltage equivalent to that between two electrodes of C310 falls to under 20 V.
3. After checking that the voltage is under 20 V, disconnect the connectors of the POWER SUPPLY Unit and remove the POWER SUPPLY Unit.
4. Using two resistors mentioned above, completely discharge residual charge from C310.



After checking that the voltage at the measurement points (equivalent to the voltage between two electrodes of C310) is under 20 V, remove the POWER SUPPLY Unit. Then, completely discharge residual charge, using resistors.

How to reset Standby power latchup (In a case where the protection against Standby power excess voltage is activated)

1. After removing the causes of the malfunction, short-circuit between the JW1 and JW2 jumpers.
2. If the POWER SUPPLY Unit functions properly, after opening the above jumpers, the unit starts up.



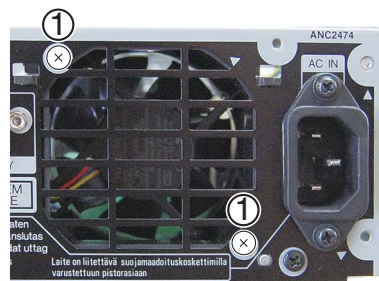
C603

To forcibly reset latchup of STBY3.4 V, short-circuit between JW1 and JW2 (near C603), using a flathead screwdriver or similar object. If the causes of the malfunction are removed, after opening the jumpers, the unit starts up.

3 REAR IO Assy

● FAN unit

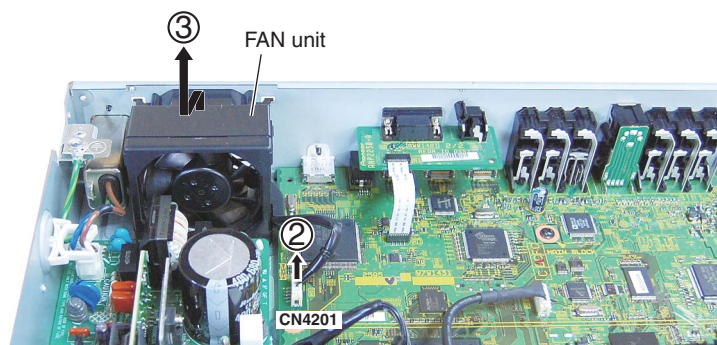
- ① Remove the two screws. (BPZ30P080FTB)



• Rear view

- ② Disconnect the one connector.

- ③ Remove the FAN unit.



● REAR IO Assy

- ① Remove the two hexagon headed screws. (ABA1382)

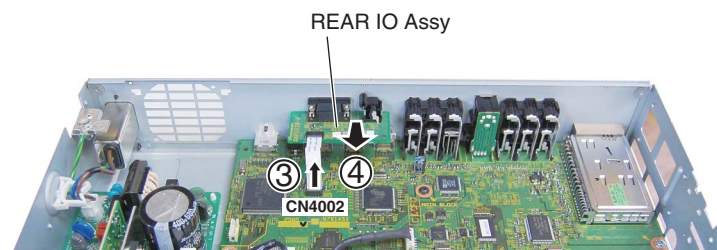
- ② Remove the one screw. (BPZ30P080FTB)



• Rear view

- ③ Disconnect the one flexible cable.

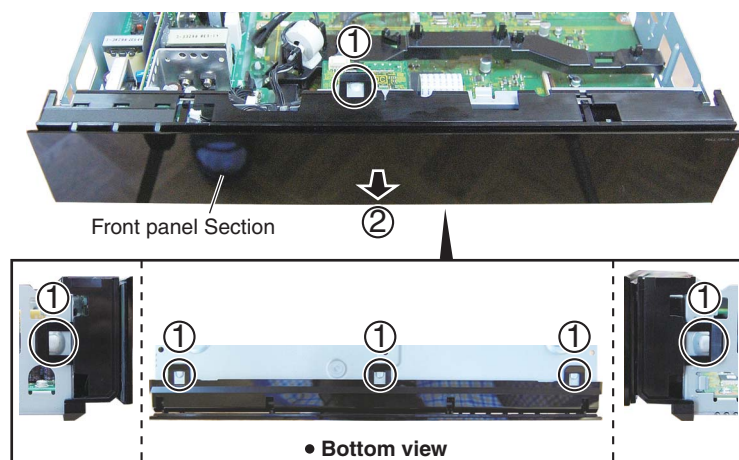
- ④ Remove the REAR IO Assy.



4 Front Panel Section

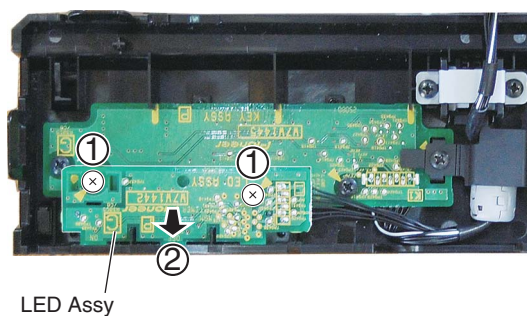
● Front panel Section

- ① Unhook the six hooks.
- ② Remove the front panel Section.



● LED and KEY Assys

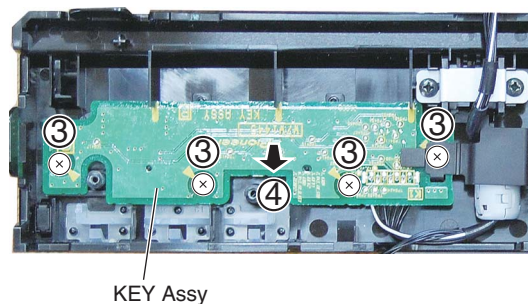
- ① Remove the two screws. (BPZ30P080FTB)
- ② Remove the LED Assy.



- ③ Remove the four screws. (BPZ30P080FTB)
- ④ Remove the KEY Assy.

Note:

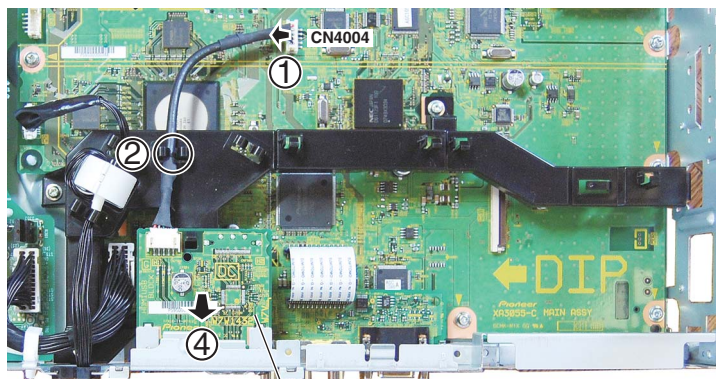
Before tightening screws, make sure that the protect film has been attached.
(For details on the place at which the protect film is to be attached, see "■ Preparations.")



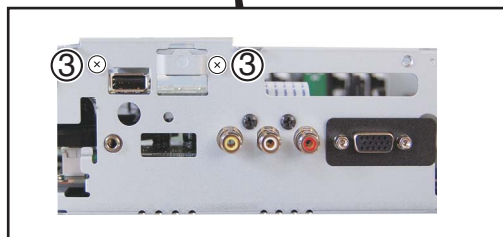
A

5 FRONT_HDM_USB Assy

- ① Disconnect the one connector.
- ② Release the jumper wire.
- ③ Remove the two screws. (BBZ30P060FTB)
- ④ Remove the FRONT_HDM_USB Assy.



FRONT_HDM_USB Assy



B

C

D

E

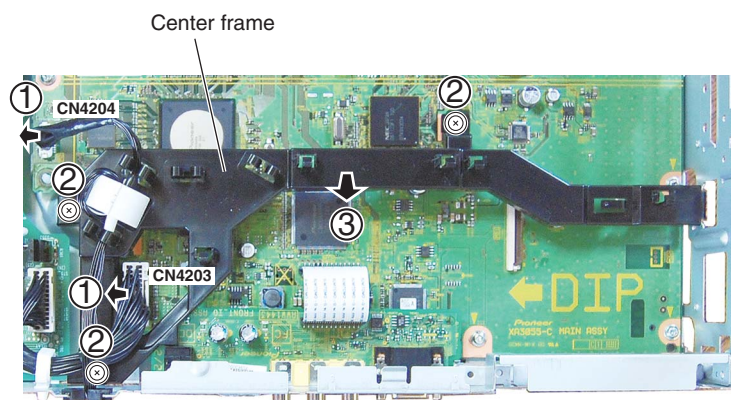
F



6 FRONT IO Assy

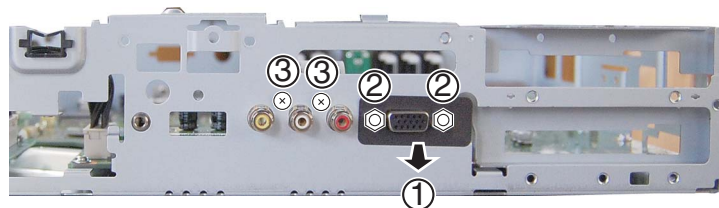
● Center frame

- ① Disconnect the two connectors.
- ② Remove the three screws. (ABA1383)
- ③ Remove the center frame.

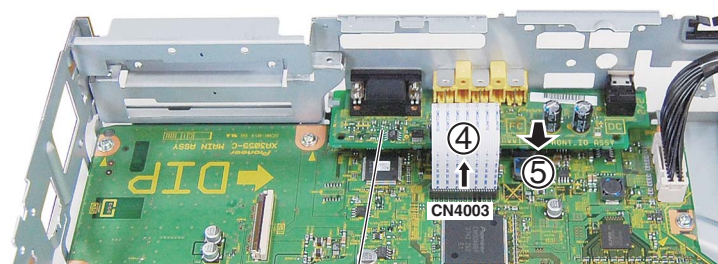


● FRONT IO Assy

- ① Remove the cover sheet.
- ② Remove the two hexagon headed screws. (ABA1382)
- ③ Remove the two screws. (BPZ30P080FTB)



- ④ Disconnect the one flexible cable.
- ⑤ Remove the FRONT IO Assy.

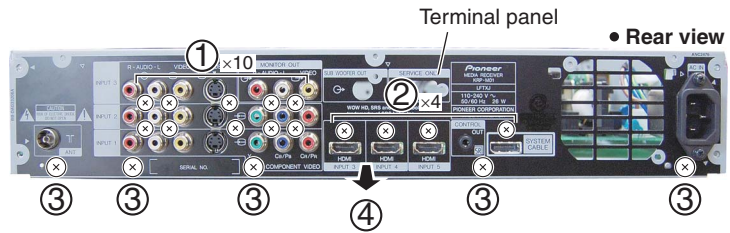


FRONT IO Assy

7 MAIN BLOCK Assy

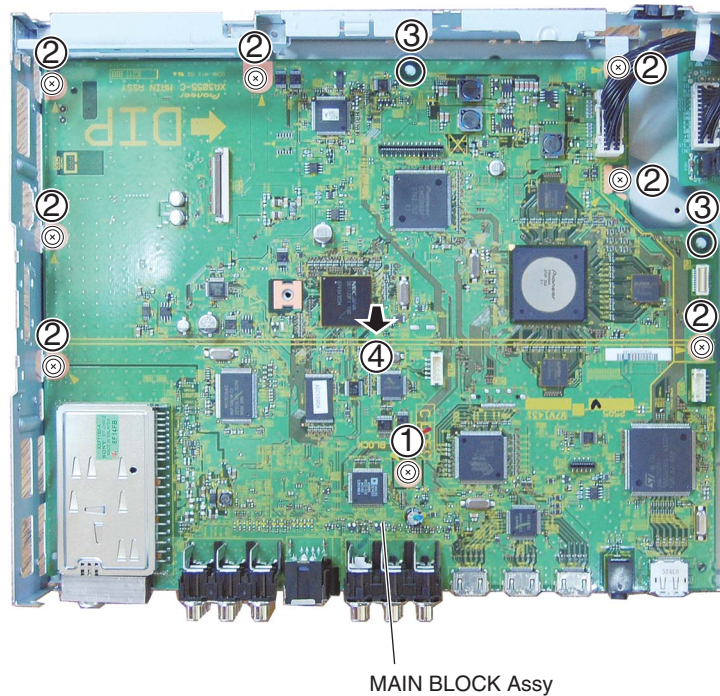
● Terminal panel

- ① Remove the 10 screws. (BPZ30P080FTB)
- ② Remove the four screws. (BMZ30P060FTB)
- ③ Remove the five screws. (BBZ30P060FTB)
- ④ Remove the terminal panel.



● MAIN BLOCK Assy

- ① Remove the one screw. (AMZ30P060FTB)
- ② Remove the seven screws. (ABA1383)
- ③ Remove the two circuit board spacers.
- ④ Remove the MAIN BLOCK Assy.



6. EACH SETTING AND ADJUSTMENT

The following items in the service manual of KRP-M01/WYSIXK5 are not applicable to this model.

HOW TO UPDATE USB

HOW TO UPDATE DISPLAY PORT FIRMWARE



1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
MAIN BLOCK Assy (*)	➡	Execute section [5-4] AUTO ADJUSTMENT of 4.2 [5] INITIALIZE.
Other assemblies	➡	No adjustment required

(*) : When replacing the MAIN BLOCK Assy, be sure to perform the FINAL SETUP.

■ Replacement of the whole Assy is required when one of the following part on the corresponding Assy is in failure

PCB Assy No.	Assy Name	Ref No.	Function Name	Part No.	Reason
AWW1431	MAIN BLOCK Assy	IC5002	HDCP EEPROM	BR24L02FV-W	Because adjustments and data writing at the level of production line are required after replacement
		IC5003	HDCP EEPROM	BR24L02FV-W	
		IC5004	HDCP EEPROM	BR24L02FV-W	
		IC7004	EMMA2 EEPROM	BR24L64F-W	
		IC6701	Flash ROM	AGC1091	
		IC6811	IF UCOM	AGC1086	
		IC7202	Flash ROM	AGC1090	
AWW1443	FRONT IO Assy	IC8501	PC EEPROM	BR24L01AFJ-W	Because adjustments and data writing at the level of production line are required after replacement

A

■ Part whose replacement is difficult

PCB Assy No.	Assy Name	Ref No.	Function Name	Part No.	Reason
AXY1223	POWER SUPPLY Unit	U0003	—	—	The maker forbids Pioneer from repairing the Assy.
AWW1431	MAIN BLOCK Assy	IC7003	SYSTEM IC (EMMA2)	UPD61123F1-100KA3A-K	Because these ICs are packaged in BGA
		IC6501	ASIC (ARIA)	PD6568A-K	
		IC6702	DDR SDRAM (ARIA)	EDD1232ABBH-5C-E-K	
		IC6703	DDR SDRAM (ARIA)	EDD1232ABBH-5C-E-K	
		IC6704	DDR SDRAM (ARIA)	EDD1232ABBH-5C-E-K	
		IC4801	ADC	AD9985KSTZ	Because these ICs require readjustment after replacement
		IC5101	AV SW	R2S11006FT	
		IC5501	RGB SW	R2S11001FT	
		IC4702	VDEC	CM0048BF	Because a radiation pad is provided
		IC4901	HDMI	SII9135CTU-K	
		IC4601	Regulator	LTC3407EMSE-2	

C

■ Adjustment Procedures After a Part that Requires Readjustment is Replaced

Execute section [5-4] AUTO ADJUST. <=> of 4.2 [5] INITIALIZE.

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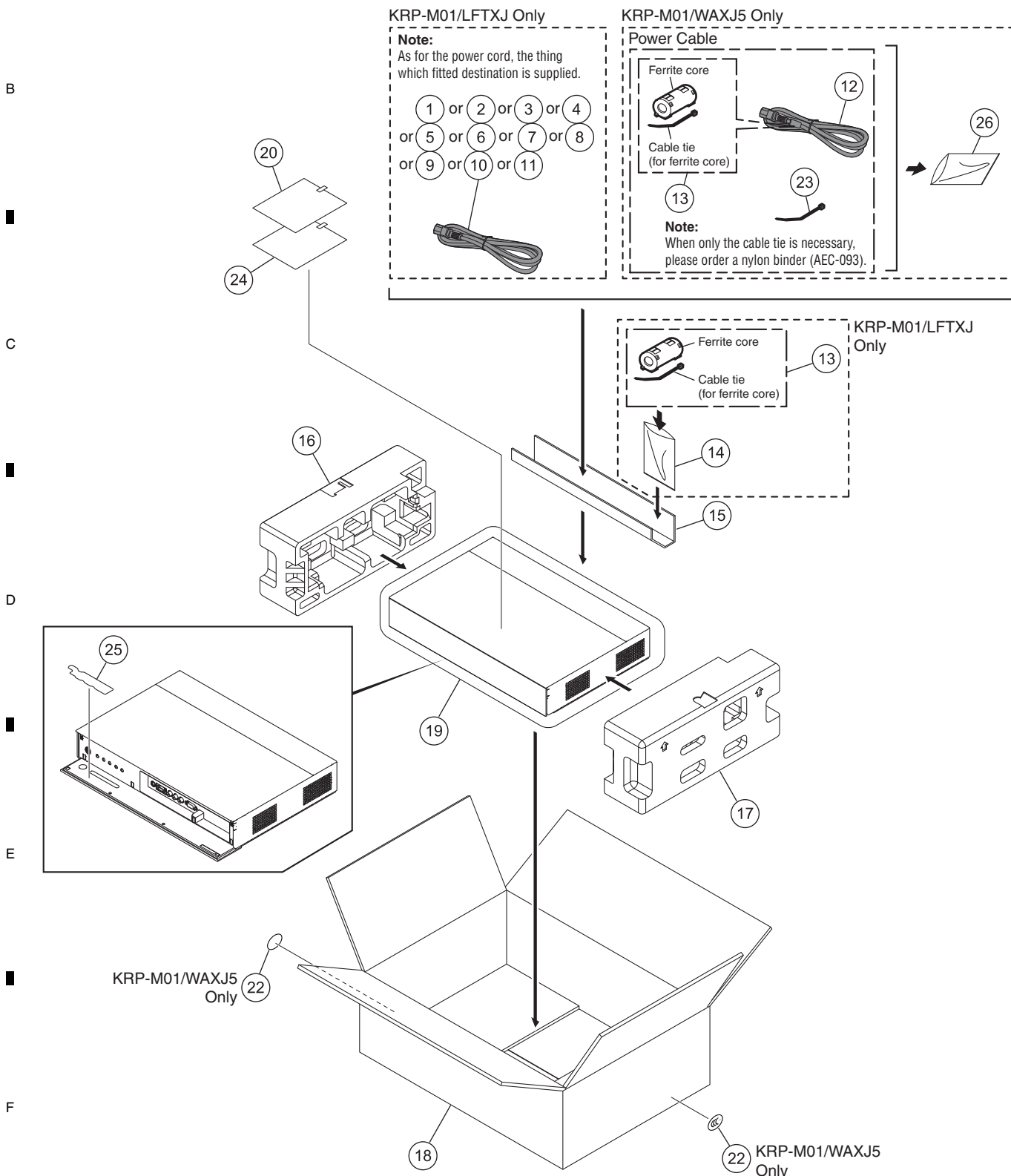
KRP-M01

7. EXPLODED VIEWS AND PARTS LIST

NOTES: ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.

- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to ▼ mark on product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

7.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
⚠ NSP 1	Power Cord	See Contrast table (2)	16	Pad L (G)	AHA2739
⚠ NSP 2	Power Cord	See Contrast table (2)	17	Pad R (G)	AHA2740
⚠ NSP 3	Power Cord	See Contrast table (2)	18	Carton	See Contrast table (2)
⚠ NSP 4	Power Cord	See Contrast table (2)	19	Mirror Mat	AHG1420
⚠ NSP 5	Power Cord	See Contrast table (2)	20	Caution Card	See Contrast table (2)
⚠ NSP 6	Power Cord	See Contrast table (2)	21	•••••	
⚠ NSP 7	Power Cord	See Contrast table (2)	NSP 22	CCC S&E Label	See Contrast table (2)
⚠ NSP 8	Power Cord	See Contrast table (2)	23	Nylon Binder	See Contrast table (2)
⚠ NSP 9	Power Cord	See Contrast table (2)	24	Film Caution Card	See Contrast table (2)
⚠ NSP 10	Power Cord Assy	See Contrast table (2)	25	Protect Film	GGP1121
⚠ 11	Power Cord Set	See Contrast table (2)	26	Vinyl Bag	See Contrast table (2)
⚠ 12	Power Cord	See Contrast table (2)			
⚠ 13	Ferrite Core (L5208)	ATX1039			
14	Polyethylene Bag	See Contrast table (2)			
15	ACC Carton (G)	AHD3679			

(2) CONTRAST TABLE

KRP-M01/LFTXJ and WAXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	KRP-M01/LFTXJ	KRP-M01/WAXJ5
⚠ NSP	1	Power Cord	ADG1232	Not used
⚠ NSP	2	Power Cord	ADG1234	Not used
⚠ NSP	3	Power Cord	ADG1236	Not used
⚠ NSP	4	Power Cord	ADG1239	Not used
⚠ NSP	5	Power Cord	ADG1241	Not used
⚠ NSP	6	Power Cord	ADG1243	Not used
⚠ NSP	7	Power Cord	ADG1244	Not used
⚠ NSP	8	Power Cord	ADG1246	Not used
⚠ NSP	9	Power Cord	ADG1251	Not used
⚠ NSP	10	Power Cord Assy	AWX1095	Not used
⚠	11	Power Cord Set	AXY1194	Not used
⚠	12	Power Cord	Not used	ADG1209
	14	Polyethylene Bag	AHG1433	Not used
	18	Carton (G)	AHD3676	Not used
	18	Carton (C)	Not used	AHD3685
	20	Caution Card	ARM1444	ARM1446
NSP	22	CCC S&E Label	Not used	DRW2310
	23	Nylon Binder	Not used	AEC-093
	24	Film Caution Card	ARM1449	ARM1451
	26	Vinyl Bag	Not used	AHG1336

EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.	
	1	FRONT_HDM_USB Assy	AWW1432	
	2	FRONT IO Assy	AWW1443	
	3	.....		A
⚠	4	Ferrite Core (F1001)	ATX1034	
	5	.....	
	6	.....	
	7	Flexible Cable (J201)	ADD1564	■
	8	.....	
	9	.....	
	10	.....	
	11	USB Cable (J102)	ADX3713	B
	12	Upper Chassis Assy	ANA2224	
	13	PCB Holder	ANG3217	
	14	Cover Sheet	AAK2850	
	15	Collar	ABN1095	
	16	Upper Cushion	AEB1504	■
	17	Top Cushion	AEB1505	
	18	Scrivet	AEC1657	
	19	Ferrite Core Holder	AEC1818	
	20	Edge Saddle	AEC1946	C
	21	Center Frame	AMR3844	
⚠	22	Gasket HP	ANK1994	
	23	Rubber Foot	VEB1349	
	24	Top Panel F (G)	AAK2962	
	25	Side Panel L	AAK2941	■
	26	Side Panel R	AAK2942	
	27	Top Panel R	AAK2946	
	28	.....	
	29	.....	
⚠	30	Gasket UP2	ANK1999	D
	31	.....	
	32	.....	
	33	.....	
	34	.....		■
	35	Hexagon Headed Screw	ABA1382	
	36	Screw	ABA1383	
	37	Screw	ABA1391	
	38	Screw	ABZ30P060FTC	E
	39	Screw	BBZ30P060FTB	
	40	Screw	BPZ30P080FTB	

■

■

■

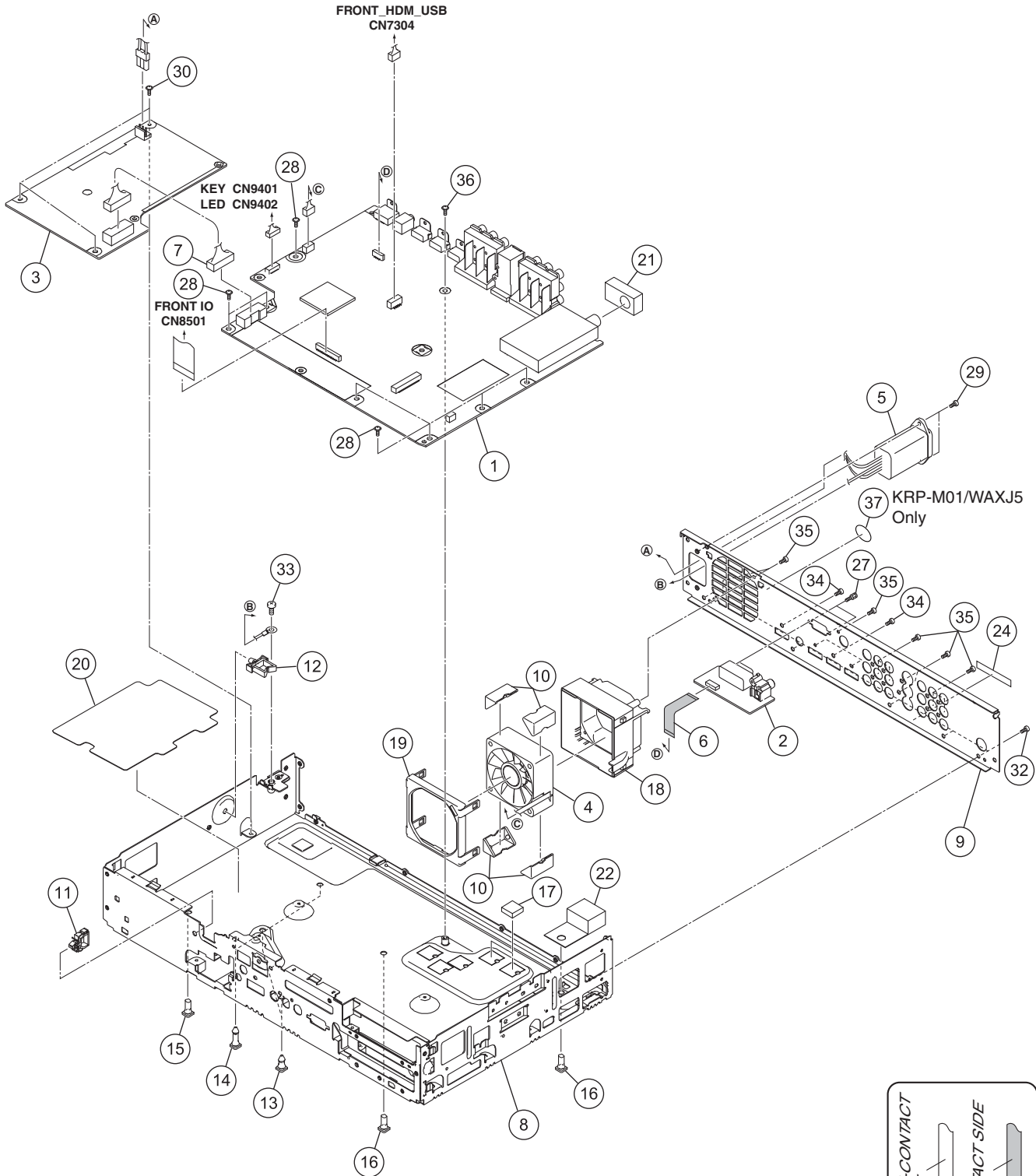
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7.3 BOTTOM SECTION



Cleaning paper :
GED-008



(1) BOTTOM SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
	1 MAIN BLOCK Assy	AWW1431	⚠ 21	Gasket GE	ANK1984
	2 REAR IO Assy	AWW1461	⚠ 22	Gasket GE2	ANK1986
⚠ 3	POWER SUPPLY Unit	AXY1223	23	•••••	
⚠ 4	DC FAN Motor 60 x 25L	AXM1068	NSP 24	Serial Label	ARW1100
⚠ 5	AC Inlet (CN1)	AKP1339	25	•••••	
	6 Flexible Cable (J207)	ADD1568	26	•••••	
	7 26P Housing Wire (J111)	ADX3674	27	Hexagon Headed Screw	ABA1382
	8 Base Chassis Assy	ANA2225	28	Screw	ABA1383
	9 Terminal Panel	See Contrast table (2)	29	Screw	ABZ30P080FTB
	10 Floating Rubber 60	AEB1410	30	Screw	BBB30P080FSN
	11 Reuse Clamp	AEC2129	31	•••••	
	12 Reuse Wire Saddle	AEC2134	32	Screw	BBZ30P060FTB
	13 Circuit Board Spacer	AEC2150	33	Screw	BMP40P080FSN
	14 Circuit Board Spacer	AEC2151	34	Screw	BMZ30P060FTB
	15 Circuit Board Spacer	AEC2152	35	Screw	BPZ30P080FTB
	16 Circuit Board Spacer	AEC2163	36	Screw	AMZ30P060FTB
	17 Silicon Sheet	AEH1182	NSP 37	CCC S&E Label	See Contrast table (2)
	18 FAN Holder 60 A	AMR3918			
	19 FAN Holder 60 B	AMR3919			
	20 Insulation Sheet	AMR3891			

(2) CONTRAST TABLE

KRP-M01/LFTXJ and WAXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	KRP-M01/LFTXJ	KRP-M01/WAXJ5
	9	Terminal Panel (G)	ANC2476	Not used
	9	Terminal Panel (C)	Not used	ANC2477
NSP	37	CCC S&E Label	Not used	DRW2310

1 2 3 4

7.4 FRONT PANEL SECTION

A

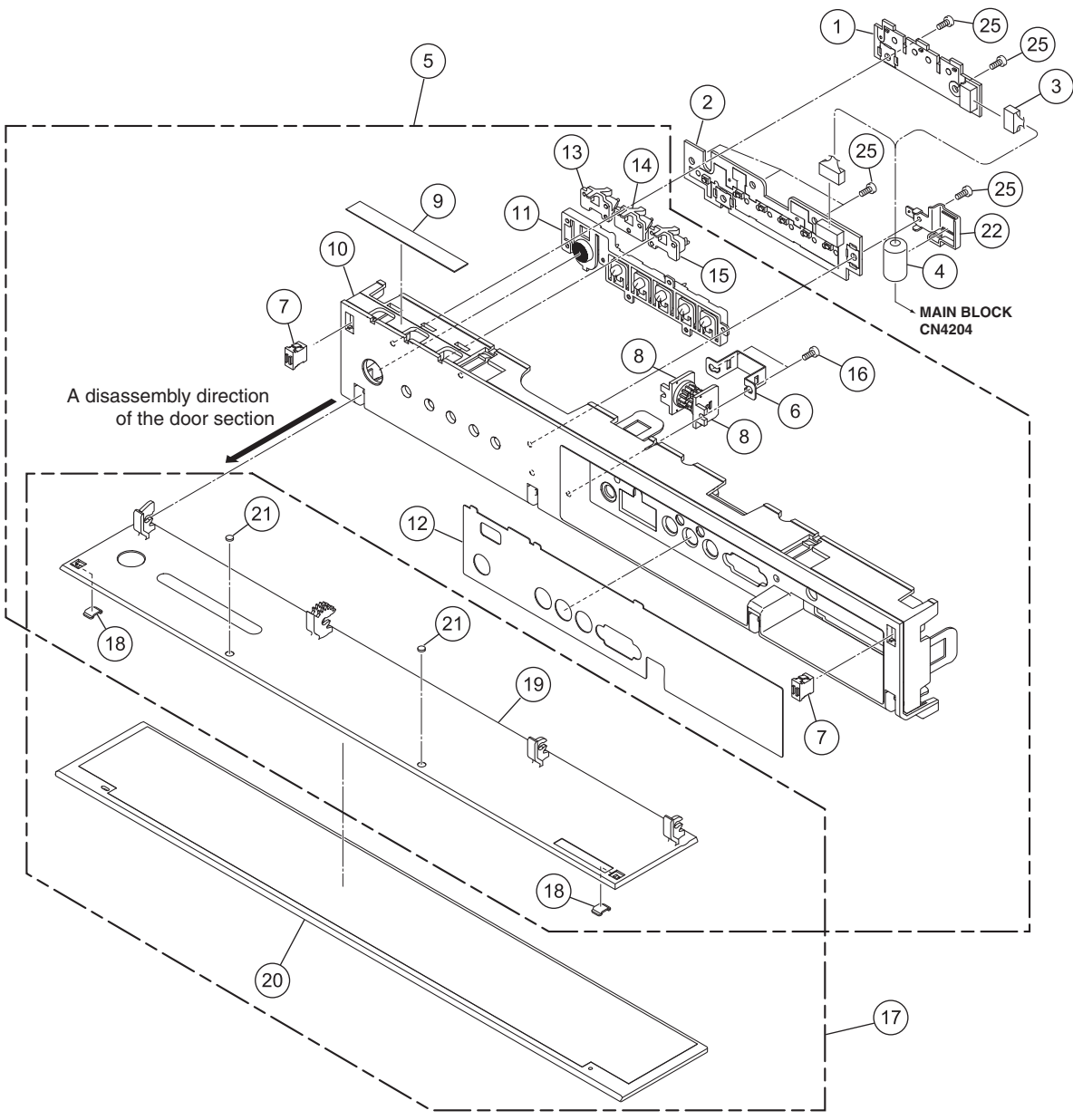
B

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A

■ When Replacing the F PANEL Assy (E)

When replacing the F PANEL Assy (E), discard the following parts of the new Assy kit for service and use the parts from the original door panel:

No.18	Door catcher
No.19	Door base
No.21	Door cushion

■

■ Reassembly Procedures for the Door Panel Service Kit

• Component parts of the GXX1283 Door Panel Service Kit

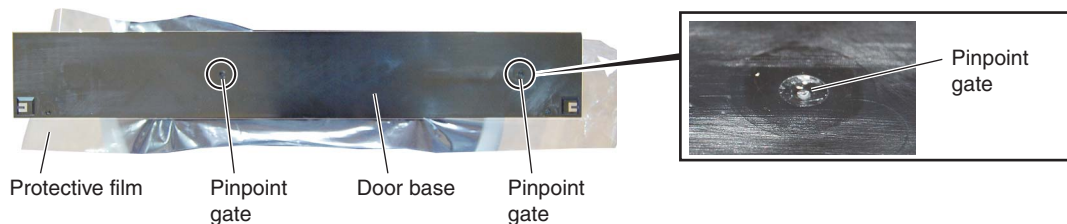
B

No.18	Door catcher (x2)
No.19	Door base (x1)
No.20	Door panel (x1)
No.21	Door cushion (x2)

■

- ① Check that two marks of pinpoint gates do not protrude from the surface of the door base to which the door panel is to be attached.
Do NOT peel off the protective film of the door base in this step.
Peel it off after all the reassembly procedures are completed.

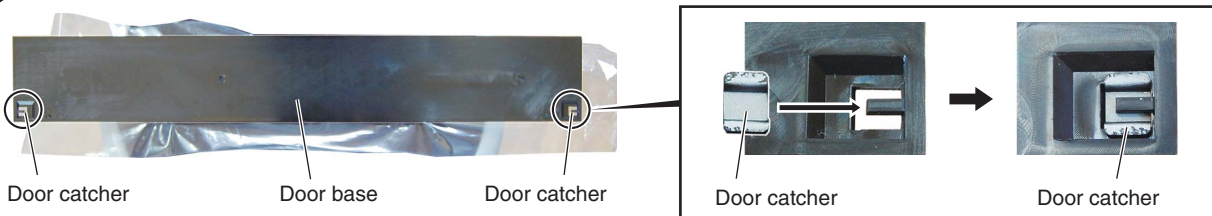
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■

- ② Attach the two door catchers.

D



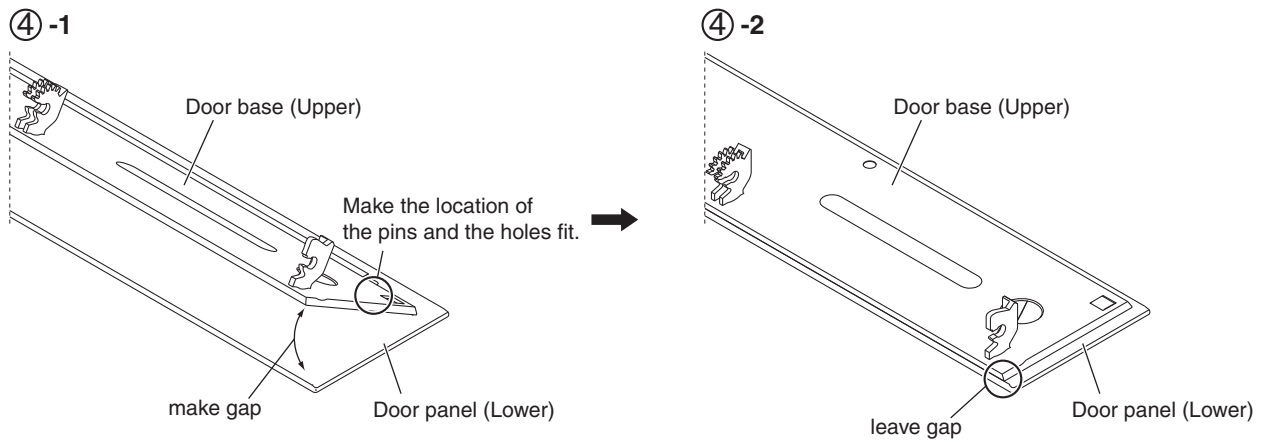
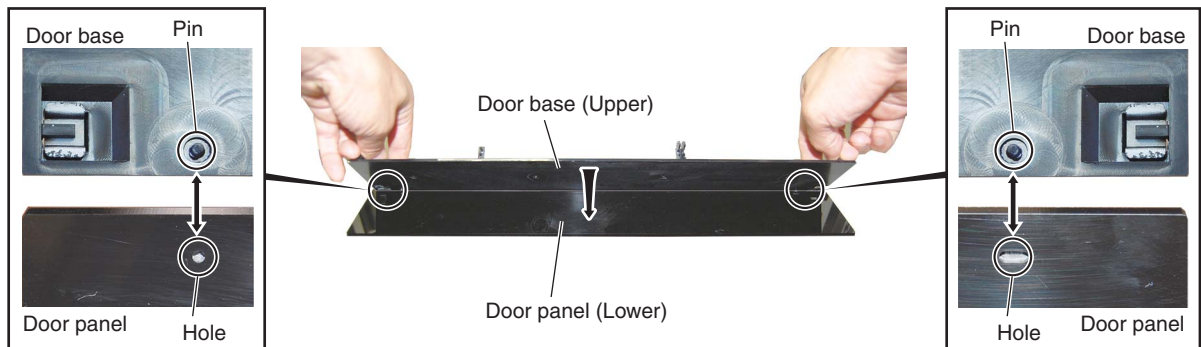
■

- ③ Peel off the separator of double-back tape on the door panel.
Do NOT peel off the protective film on the exterior surface of the door panel in this step.
Peel it off after all the reassembly procedures are completed.

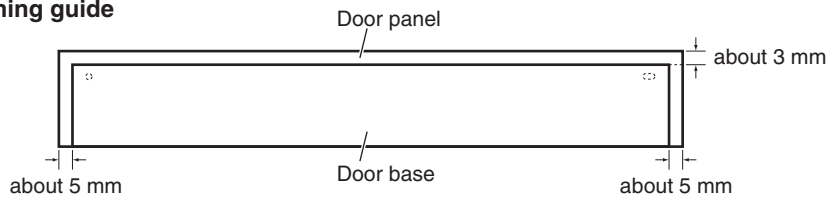
E

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- ④ Align the two positioning pins of the door base with the holes in the door panel.
When positioning, leave gaps between the door panel and door base, as shown in the figure below:

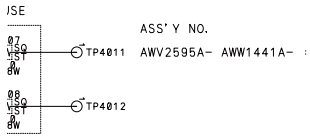


Positioning guide

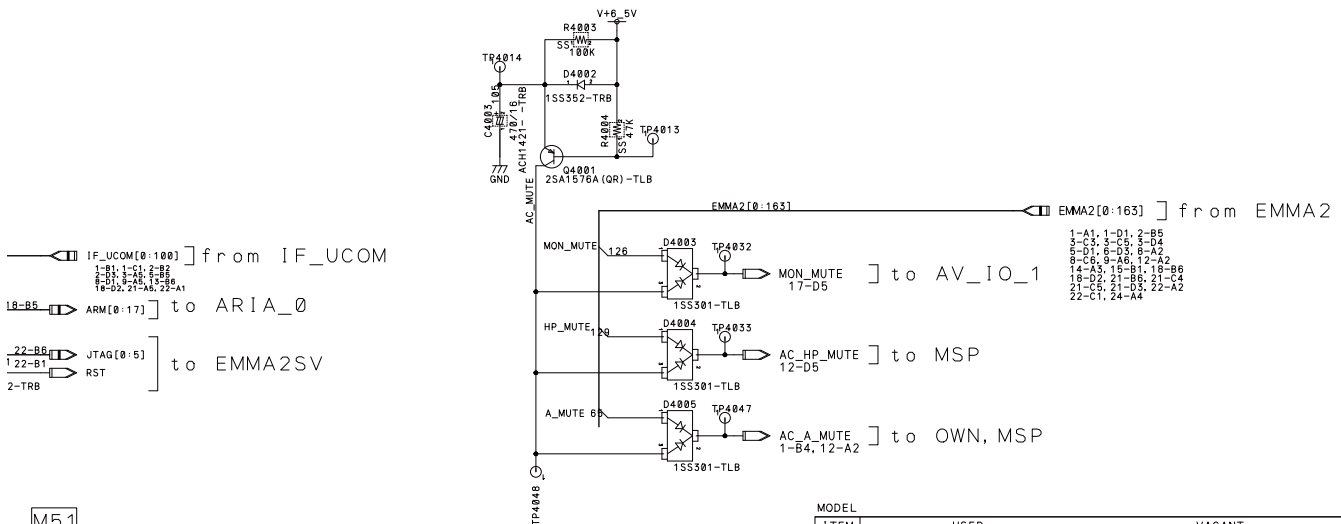
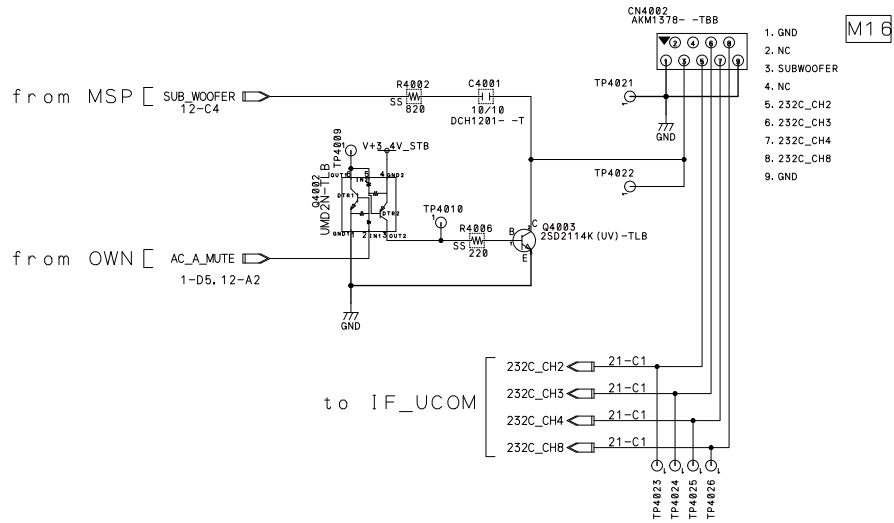


- ⑤ Stick the door base and door panel together, by pressing them all over.

- ⑥ Attach the two door cushions.



from/to REAR_IOAss'y



MODEL	USED	VACANT
ITEM		
R	4001-4010, 4013-4023	4007-4010, 4017, 4018
C	4001, 4003	
Q	4001-4003	
D	4001-4005	
CN	4001-4004	

from EMMA2SV

MAIN ASSY (MR_IBD) (01/25)
BOARD_IF_0 BLOCK

AWV2595- : AWW1431

8.2 MAIN BLOCK ASSY (2/24) [BOARD_IF_1 BLOCK]

A

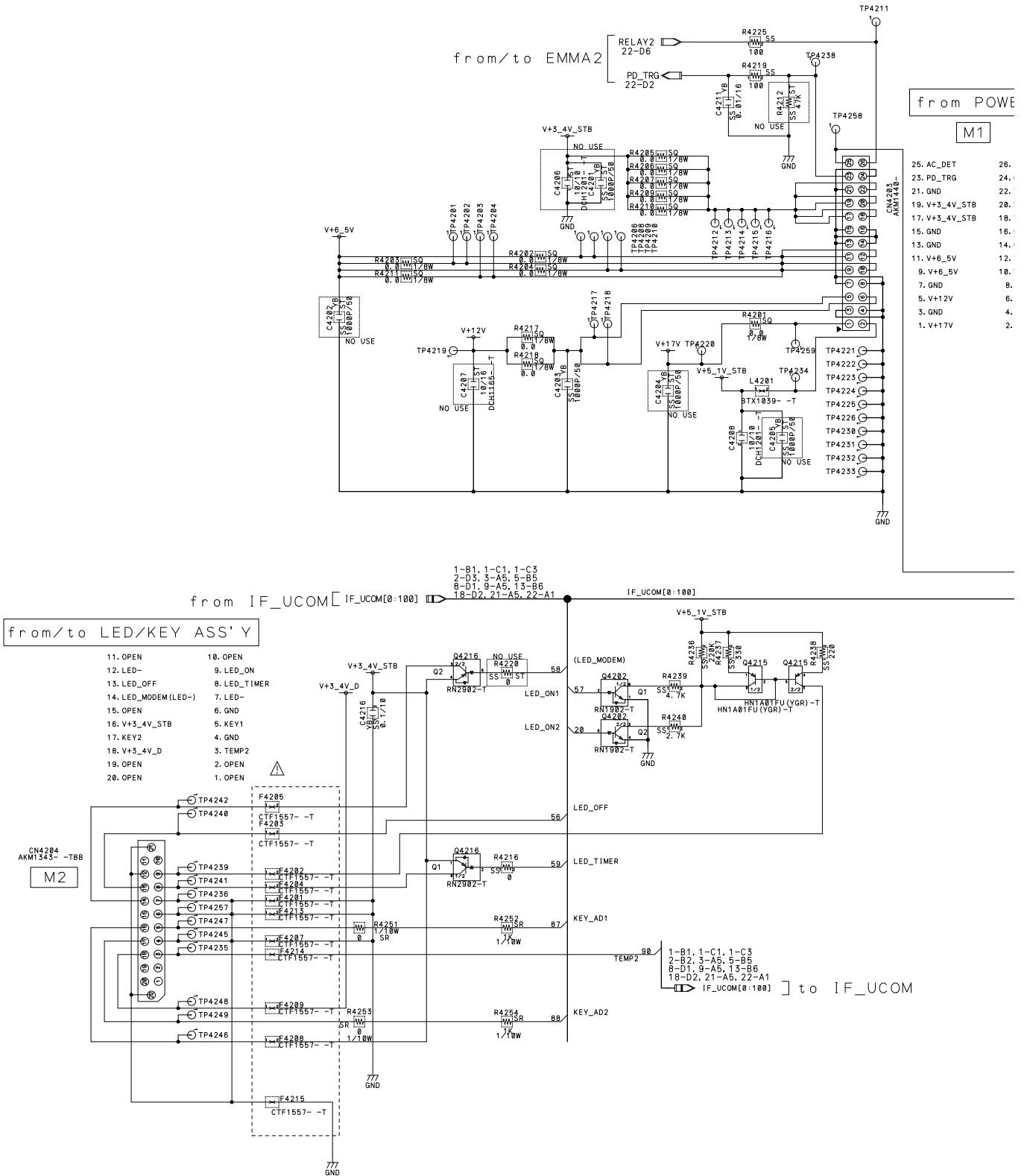
B

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
7

COM

from POWER SUPPLY UNIT

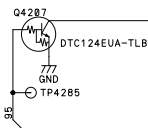
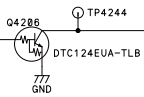
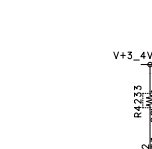
M1

- 25. AC_DET
- 23. PD_TRG
- 21. GND
- 19. V+3_4V_STB
- 17. V+3_4V_STB
- 15. GND
- 13. GND
- 11. V+6_5V
- 9. V+6_5V
- 7. GND
- 5. V+12V
- 3. GND
- 1. V+17V
- 26. RELAY
- 24. GND
- 22. V+3_4V_STB
- 20. V+3_4V_STB
- 18. V+3_4V_STB
- 16. GND
- 14. GND
- 12. V+6_5V
- 10. V+6_5V
- 8. GND
- 6. V+12V
- 2. V+5_1V_STB

The  mark found on some component parts should be replaced with some parts(safety regulation authorized) of identical designation.

from EMMA2

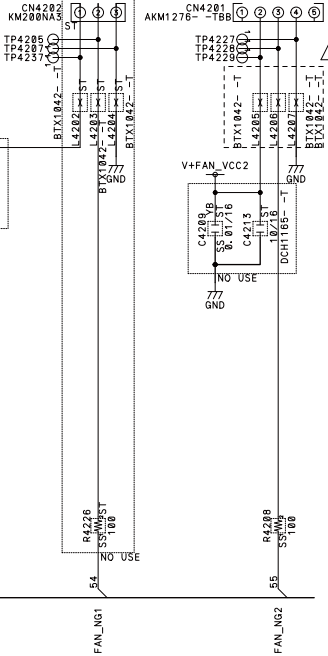
- EMMA2[0:163]
- 1-A1, 1-C6, 1-D1
- 2-C5, 2-D1, 2-D4
- 3-D1, 3-D8, 3-A2
- 4-C6, 4-A6, 4-A2
- 5-C6, 5-A6, 5-B6
- 6-D2, 6-B6, 6-C4
- 7-B6, 7-C6, 7-A2
- 8-C1, 8-A4



to FAN

M32

M31



MODEL

ITEM	USED	VACANT
R	4201-4212, 4216-4220, 4225, 4226, 4233, 4236-4240, 4251-4254	4212, 4220, 4226
C	4201-4211, 4213, 4214, 4216	4201, 4202, 4204-4207, 4209, 4210, 4213, 4214
Q	4202, 4206, 4207, 4215, 4216	
IC		
F	4201-4205, 4207-4209, 4213-4215	
L	4201-4207	4202-4204
CN	4201-4204	4202

MAIN ASSY (MR_IBD) (02/25)
BOARD_IF_1 BLOCK

AWV2595- : AWW1431

8.3 MAIN BLOCK ASSY (3/24) [POWER_0 BLOCK]

A

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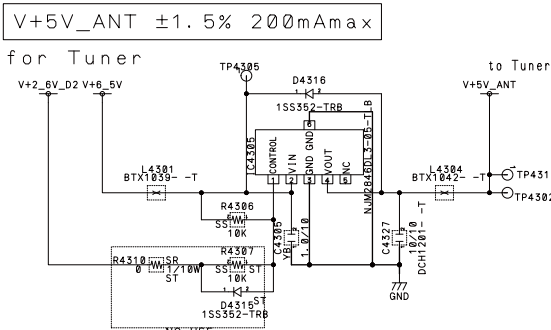
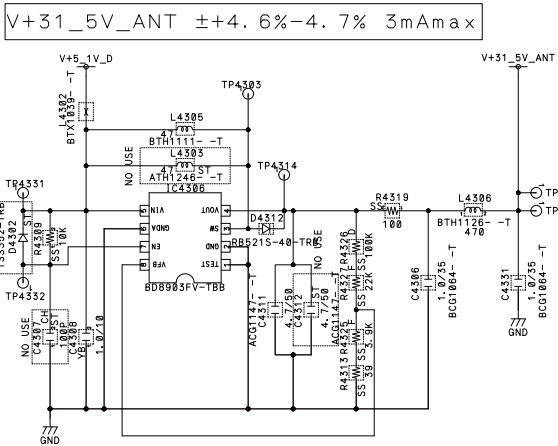
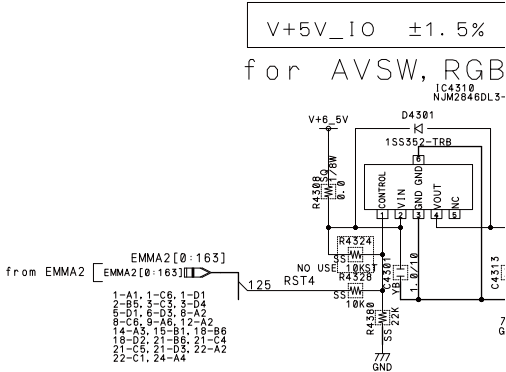
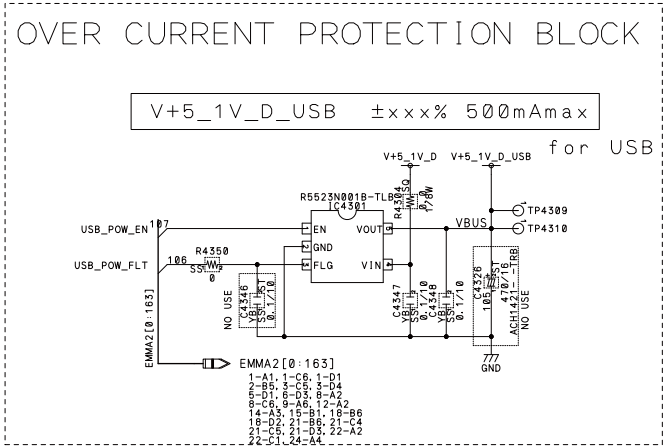
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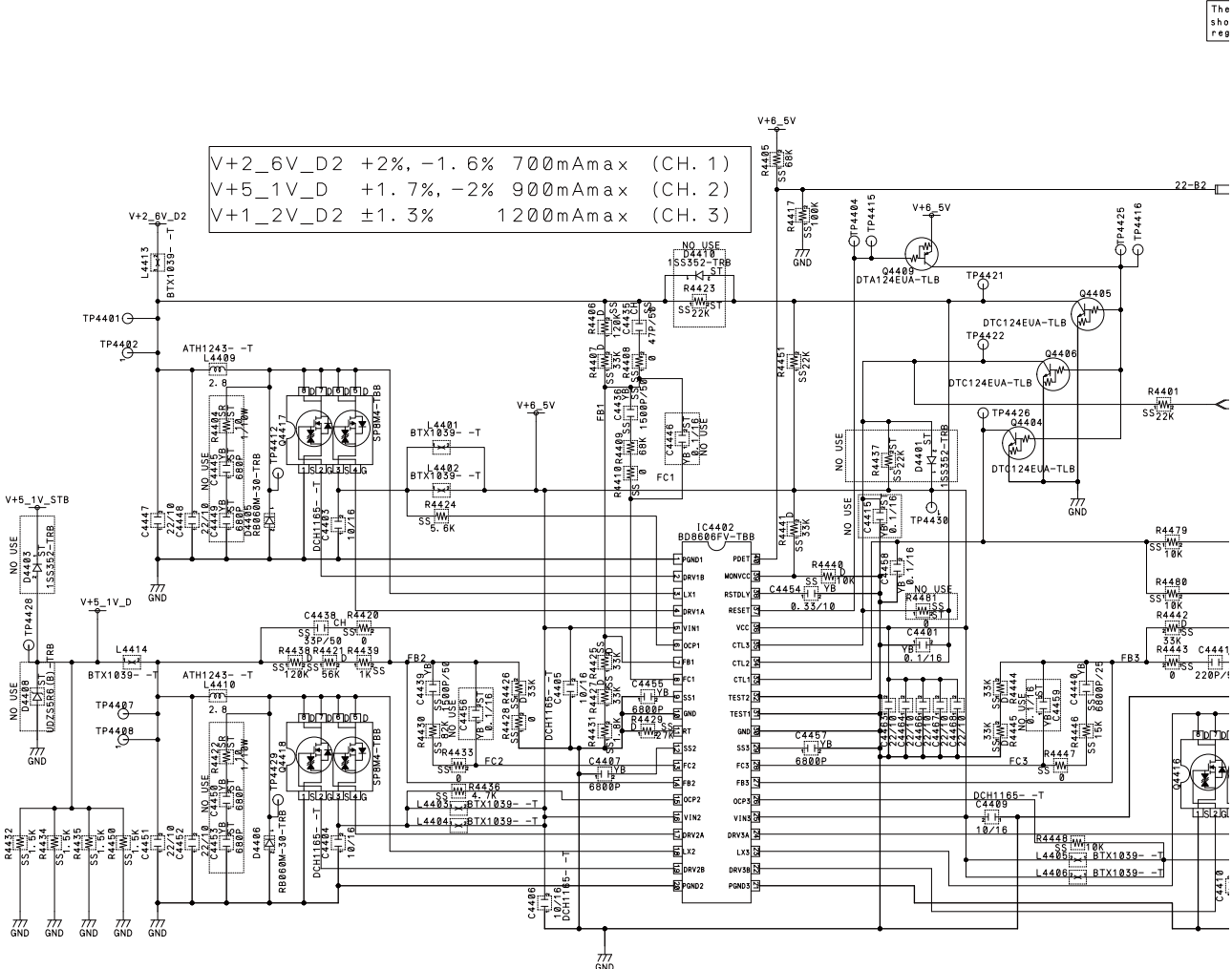
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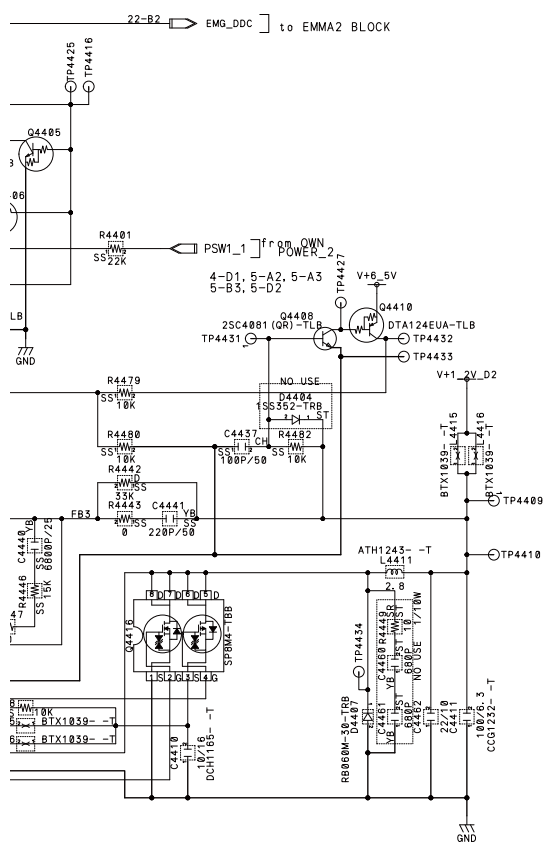
MODEL	ITEM	USED
R	4303-4310, 4313, 4316, 4319, 4324-4328, 4339-4350-4356, 4378-4380	
	4301, 4303-4313, 4315, 4326, 4327, 4331, 4342, 4346-4348, 4350-4352	
Q	4303, 4307	
	4301-4303, 4305, 4306, 4308-4310	
L	4301-4306	
	4301, 4302, 4304-4306, 4312, 4315, 4316	
CN	4201-4204	

8.4 MAIN BLOCK ASSY (4/24) [POWER_1 BLOCK]

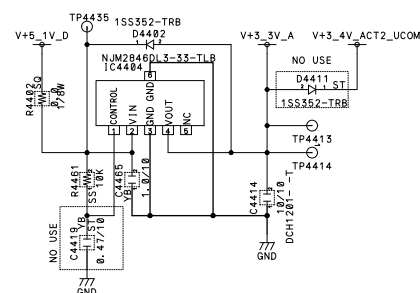


MODEL	
ITEM	USED
R	4401-4410, 4412, 4417, 4451, 4461, 4469-4471, 4475, 4479-4482
	4401, 4403-4407, 4409-4414, 4415, 4419, 4425-4435-4441, 4445-4468
Q	4404-4410, 4413, 4416-44
IC	4402, 4404
L	4401-4406, 4409-4411, 44416
D	4401-4408, 4410, 4411
CN	4201-4204

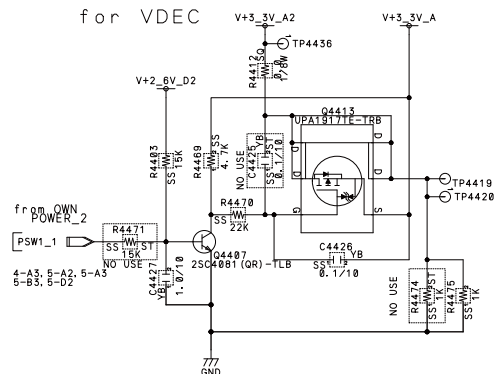
The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.



V+3_3V_A $\pm 1.5\%$ 330mAmax
for ADC, VDEC



V+3_3V_A2 $+1\%$, -1.4% 150mAmax
for VDEC



USED	VACANT
31-4410, 4412, 4417, 4420- 31, 4461, 4469-4471, 4474, 15, 4479-4482	4404, 4422, 4423, 4437, 4449, 4471, 4474, 4481
31, 4403-4407, 4409-4411, 4, 4415, 4419, 4425-4427, 15-4441, 4445-4468	4415, 4419, 4425, 4445, 4446, 4449, 4450, 4453, 4456, 4459- 4461
14-4410, 4413, 4416-4418	
12, 4404	
31-4406, 4409-4411, 4413- 16	
31-4408, 4410, 4411	4401, 4403, 4404, 4408, 4410, 4411
31-4204	

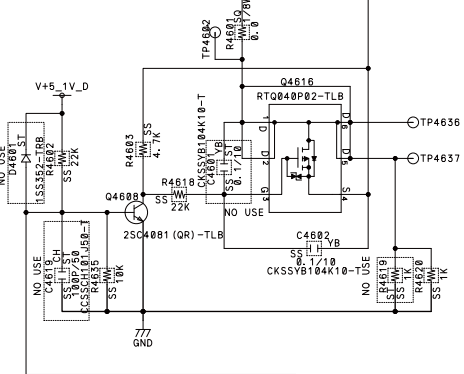
MAIN ASSY (MR_1BD) (04/25)
POWER_1 BLOCK

AWV2595- : AWW1431

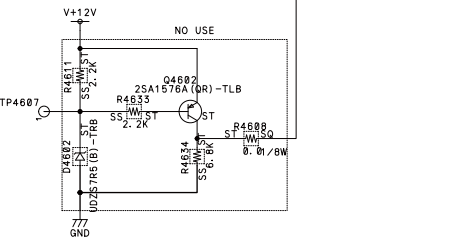
8.5 MAIN BLOCK ASSY (5/24) [POWER_2 BLOCK]

A

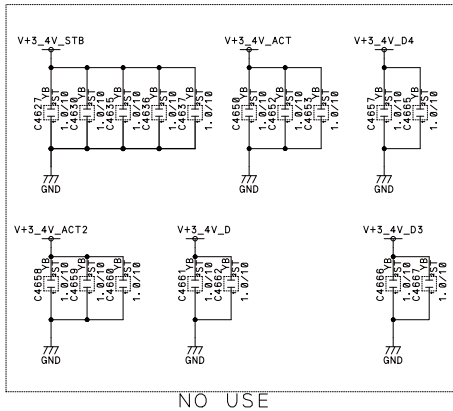
V+3_4V_D +3. 5%, -4. 4% 120mAmax
for ADC, MSP



B

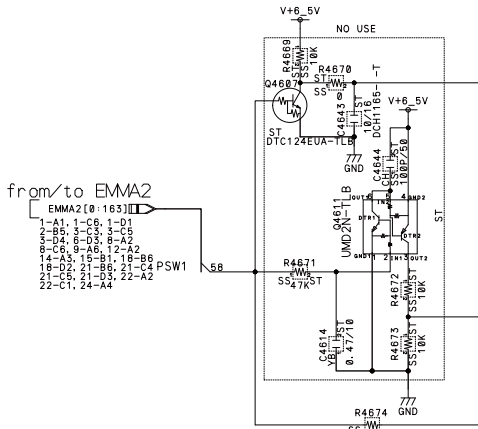


C



D

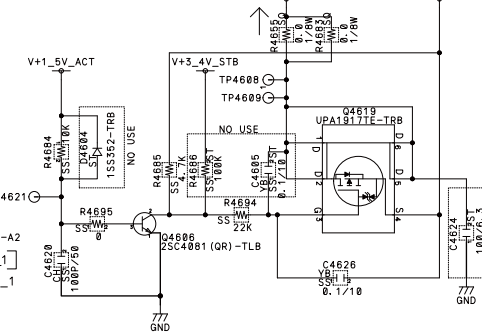
CONTROL BLOCK



E

V+3_4V_ACT3 +3. 5%, -5% 460mAmax

for Mod, DP

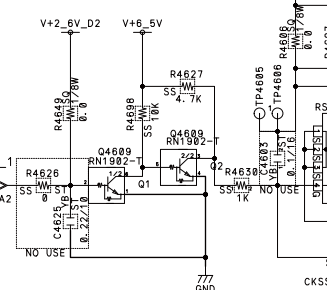


F

The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

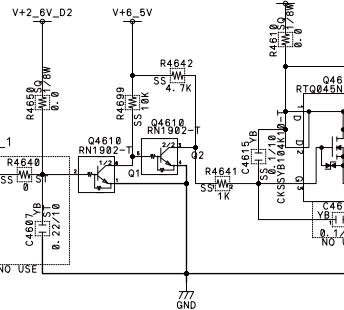
V+3_4V_D4 +3. 5%, -8%

for VDEC, HDMI



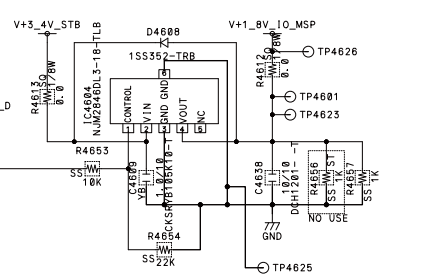
V+1_8V_D3 +1%, -1. 4% 1

for VDEC



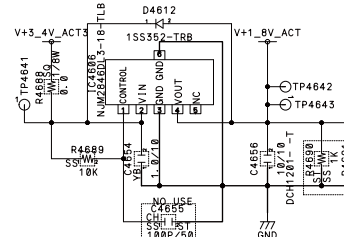
V+1_8V_IO_MSP $\pm 1. 5\%$ 420mAmax

for MSP

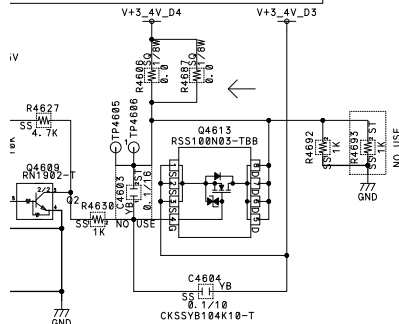


V+1_8V_ACT $\pm 1. 5\%$ 440mA

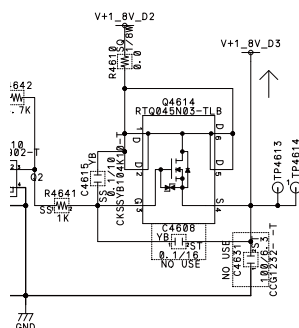
for DP



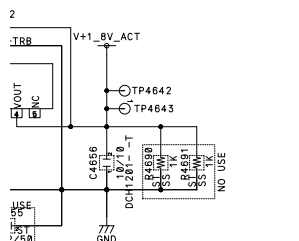
+3.5%, -8% 820mAmax



+1%, -1.4% 160mAmax



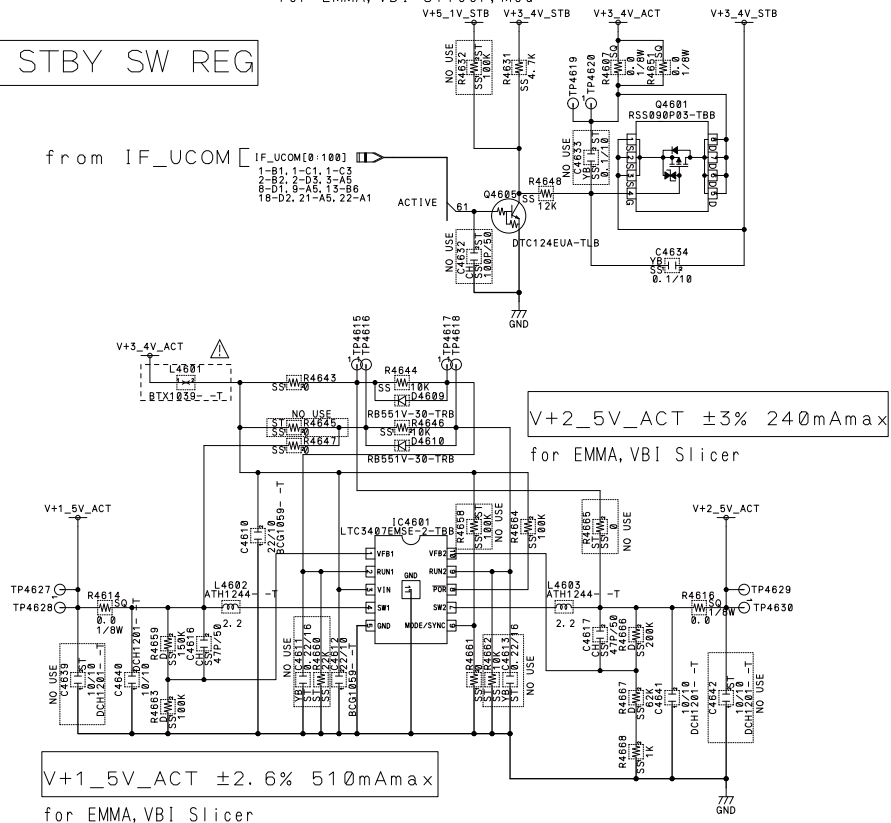
±1.5% 440mAmax



STBY SW REG

from IF_UCOM [IF_UCOM[0:100]
1-B1, 1-C1, 1-C3
2-D2, 2-D3, 2-A6
3-A6, 3-A6B
1B-D2, 21-A5, 22-A1

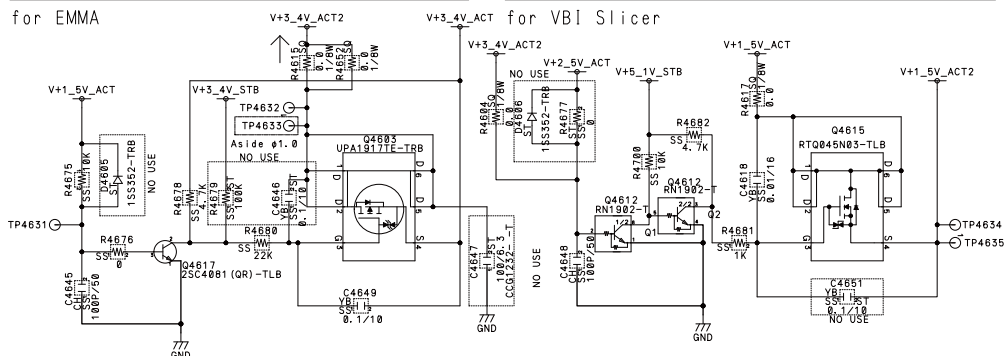
V+3_4V_ACT +3.5%/-4.5% 980mAmax
for EMMA, VBI Slicer, Mod



V+1_5V_ACT ±2.6% 510mAmax
for EMMA, VBI Slicer

V+3_4V_ACT2 +3.5%, -5% 25mAmax
for EMMA

V+1_5V_ACT2 +2.6%, -2.7% 23mAmax



USED	VACANT
-4604, 4606-4620, 4695, 4698-4700	4608, 4611, 4619, 4625, 4626, 4629, 4632-4634, 4638, 4640, 4645, 4656, 4658, 4660, 4662, 4665, 4669-4675, 4677, 4679, 4686, 4690, 4691, 4695
-4662, 4665-4667	4681, 4683, 4685, 4687, 4688, 4611, 4613, 4614, 4619, 4622, 4624, 4625, 4627, 4629-4633, 4635-4637, 4639, 4643-4644, 4646, 4647, 4650-4653, 4657- 4662, 4665-4667
-4619	4602, 4607, 4611
-4603, 4604, 4606	
-4605	
-4606, 4608-4610, 4612	4601, 4602, 4604-4606

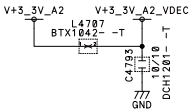
MAIN ASSY (MR_1BD) (05/25)
POWER_2 BLOCK

AWV2595- : AWW1431

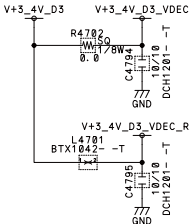
1 2 3 4

8.6 MAIN BLOCK ASSY (6/24) [VDEC BLOCK]

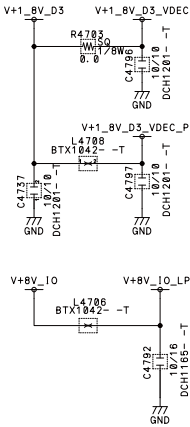
A



B



C

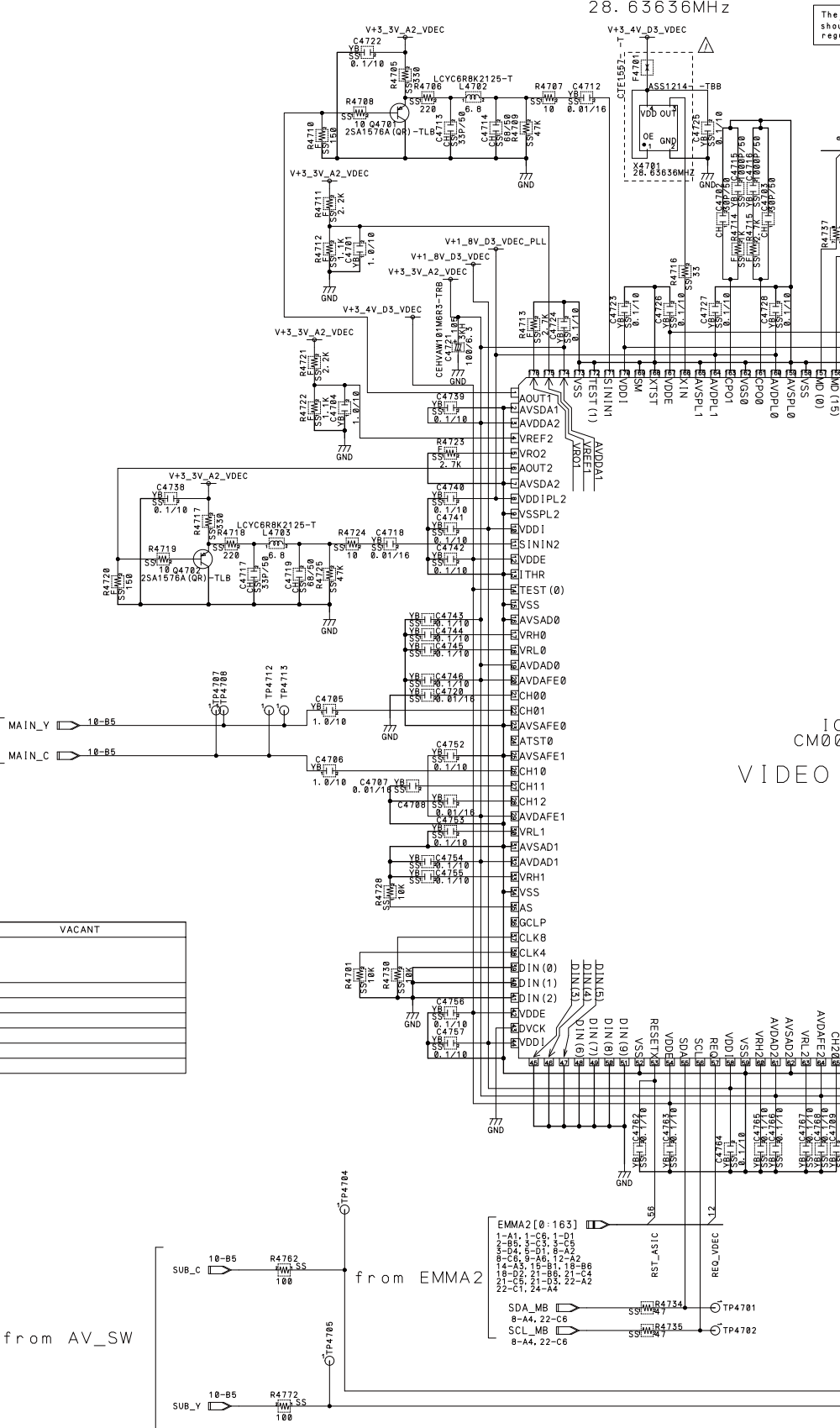


D

MODEL		
ITEM	USED	VACANT
R	4701-4703, 4705-4726, 4728, 4730, 4731, 4734-4752, 4762, 4772	
C	4701-4774, 4787, 4792-4797	
Q	4701, 4702	
IC	4701, 4702	
F	4701	
X	4701	
L	4701-4703, 4706-4708	

E

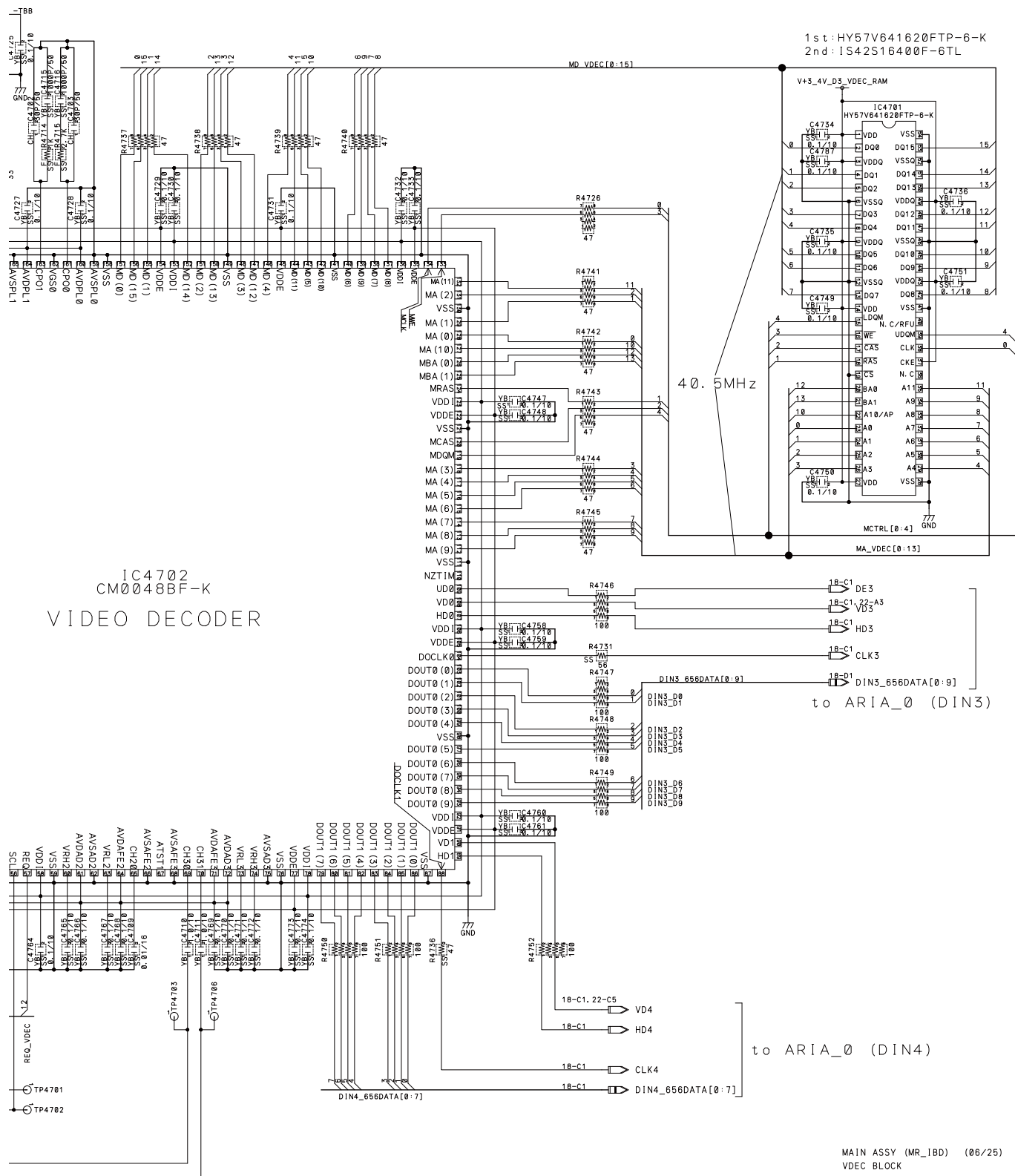
F



MHz



The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.



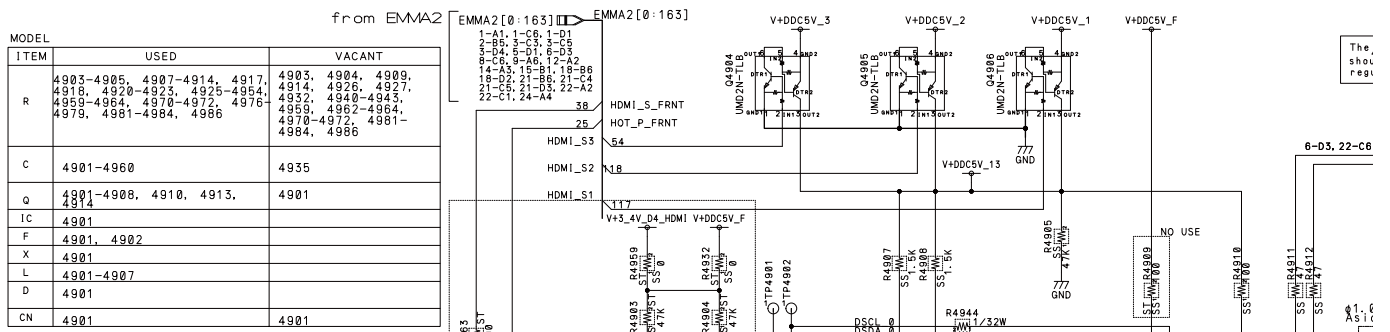
4

F

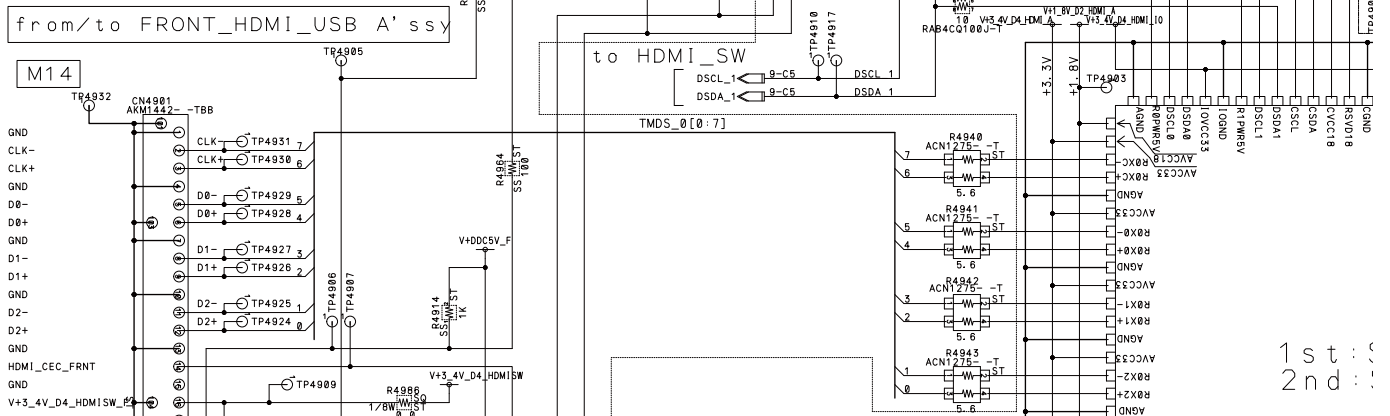


8.8 MAIN BLOCK ASSY (8/24) [HDMI_RX BLOCK]

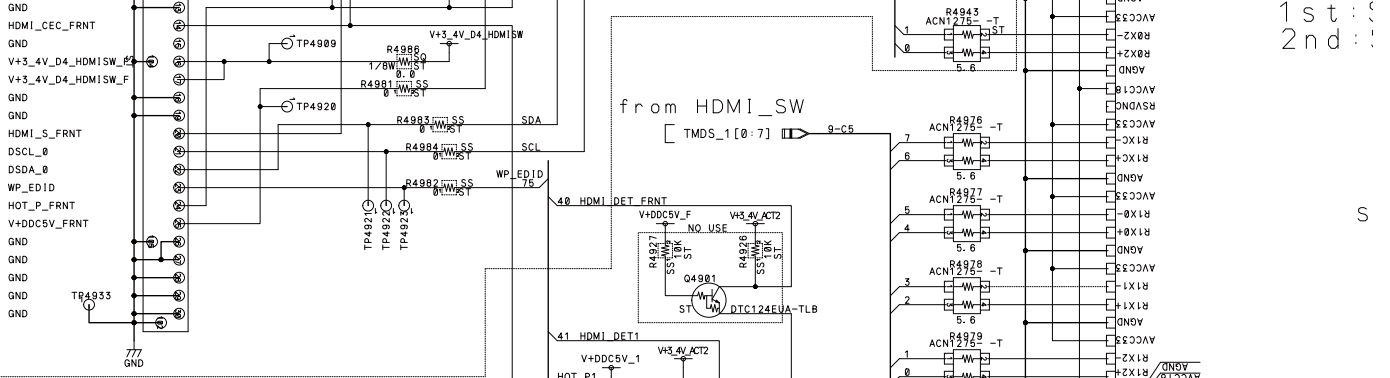
A



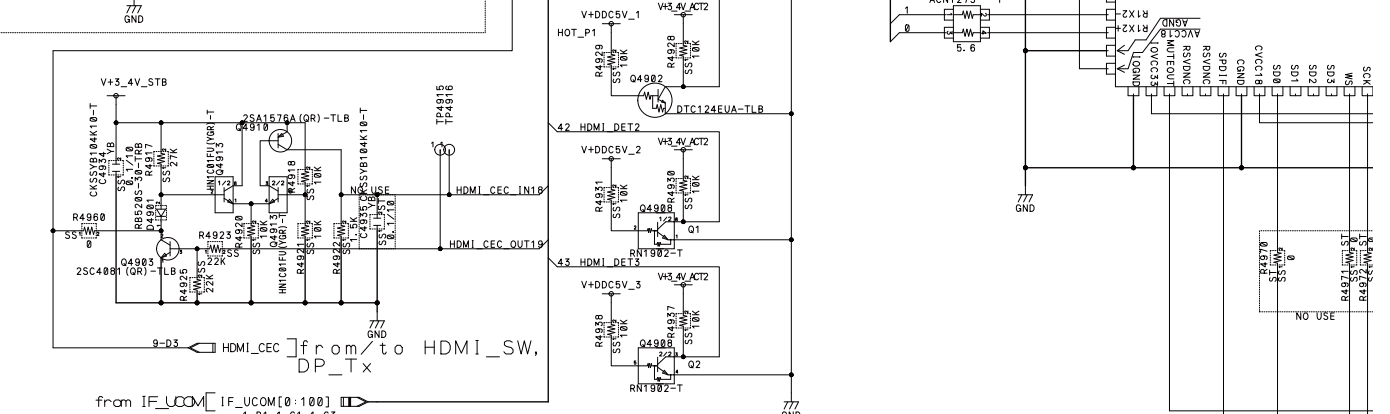
B



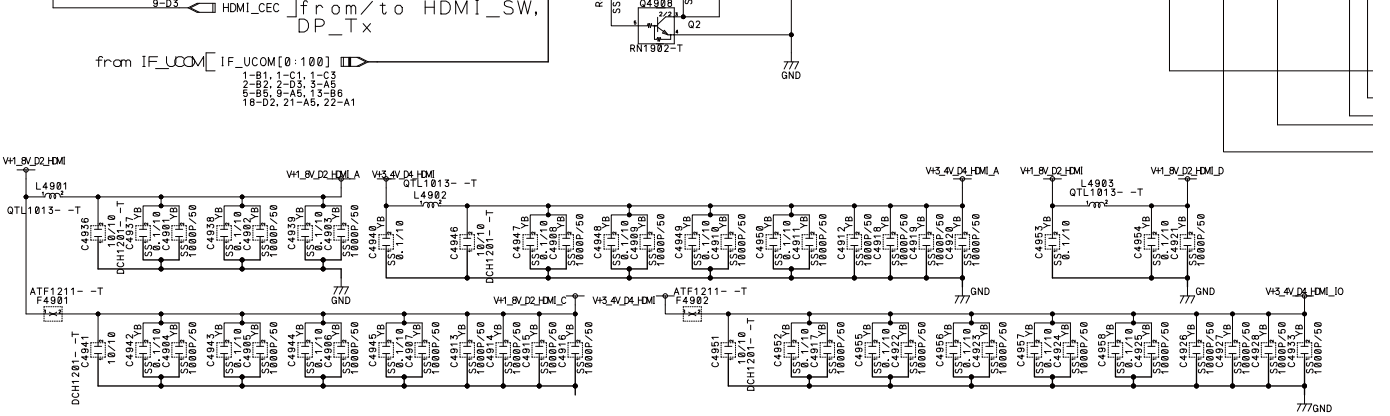
C



D



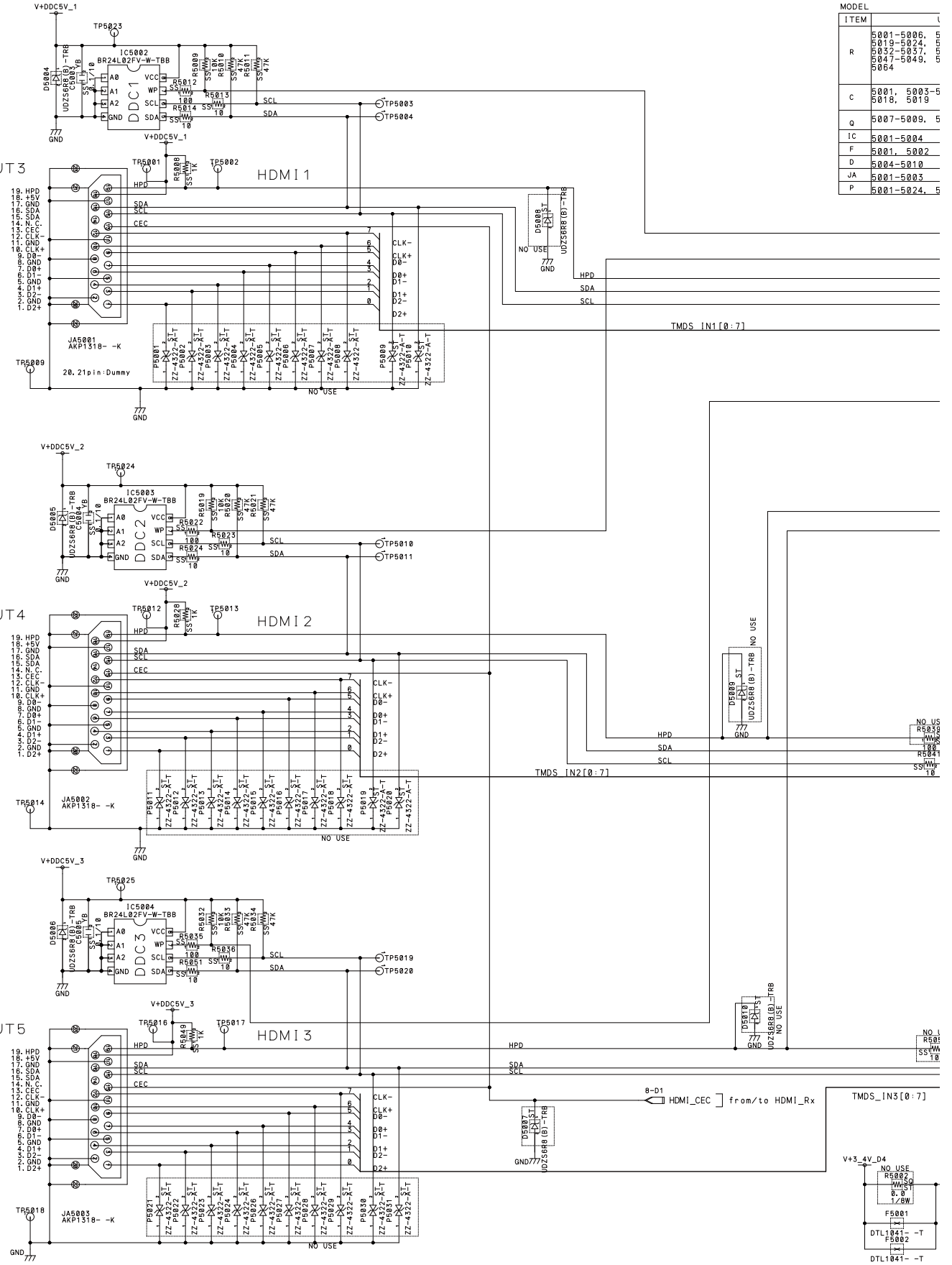
E



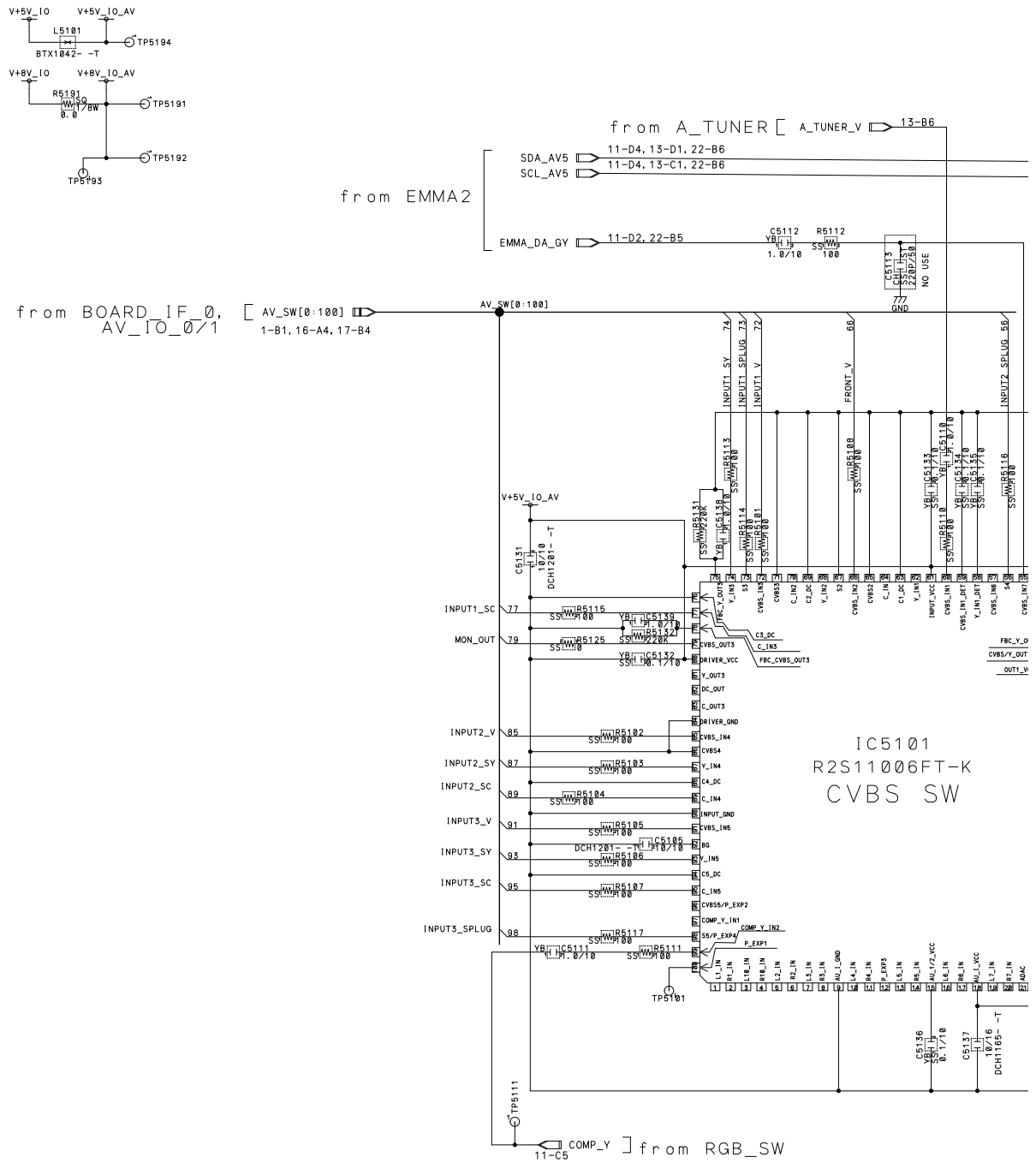
F



8.9 MAIN BLOCK ASSY (9/24) [HDMI_SW BLOCK]

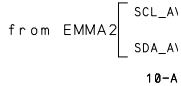


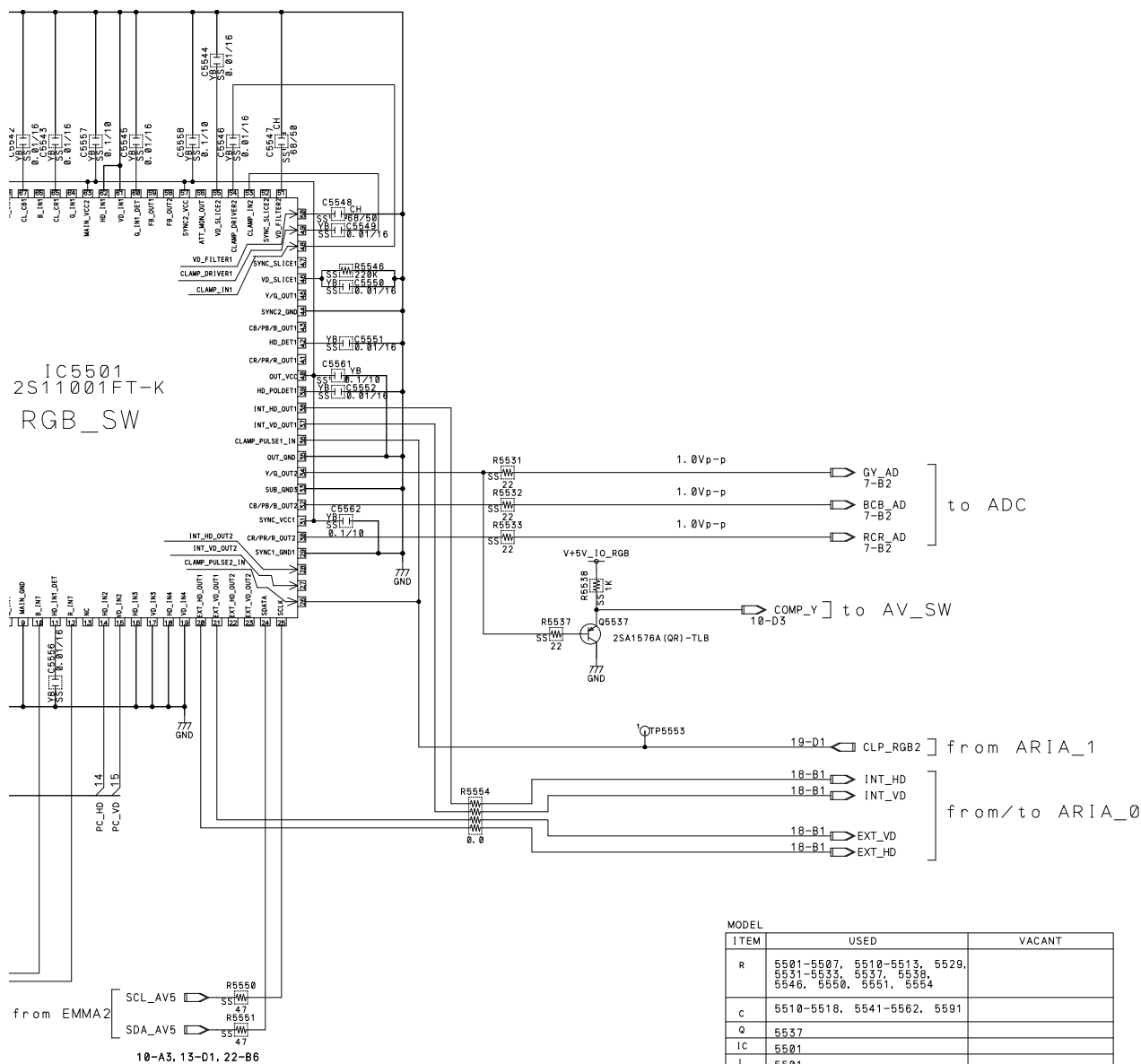
8.10 MAIN BLOCK ASSY (10/24) [AV_SW BLOCK]



4

F

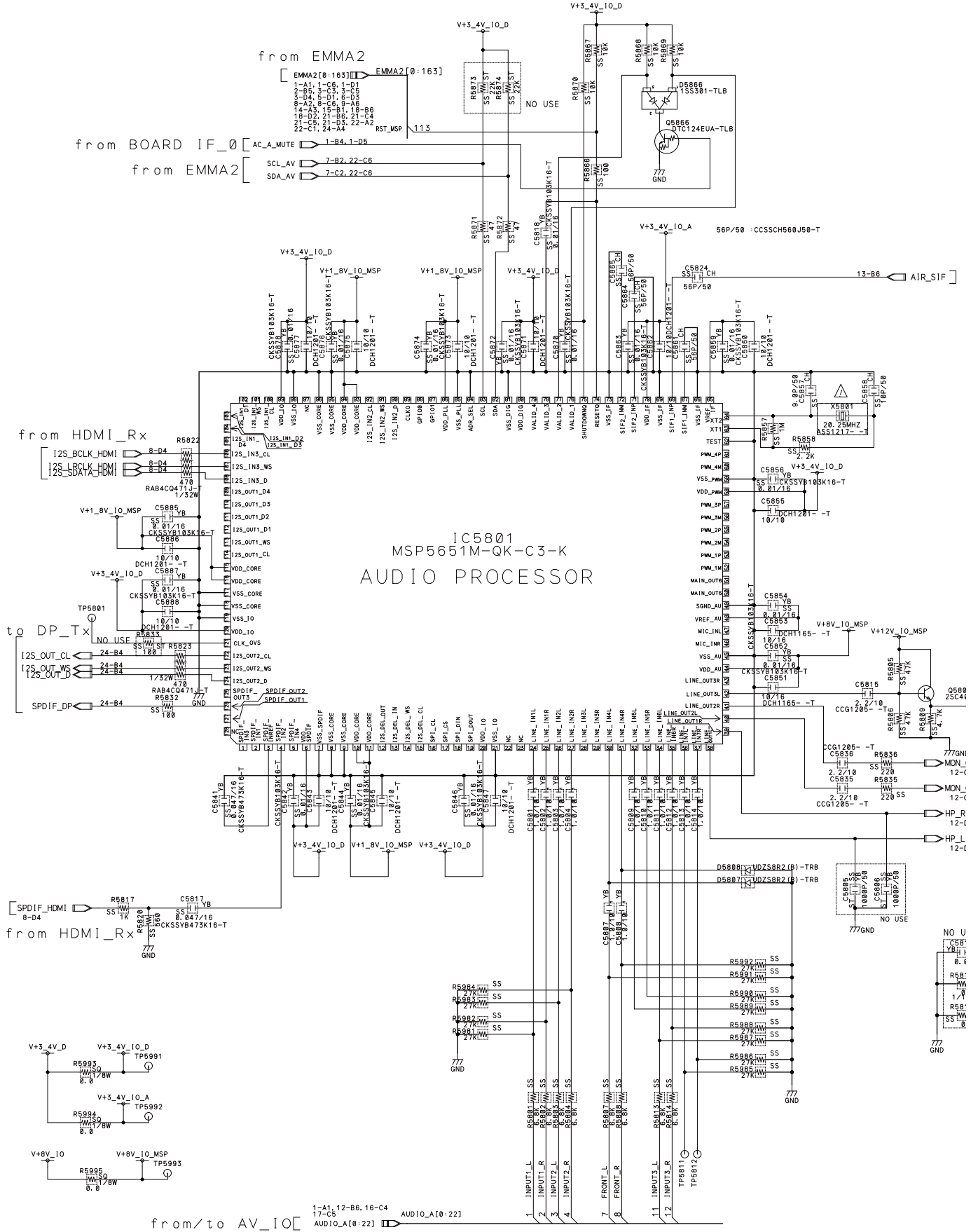




MAIN ASSY (MR_1BD) (11/25)
RGB_SW BLOCK

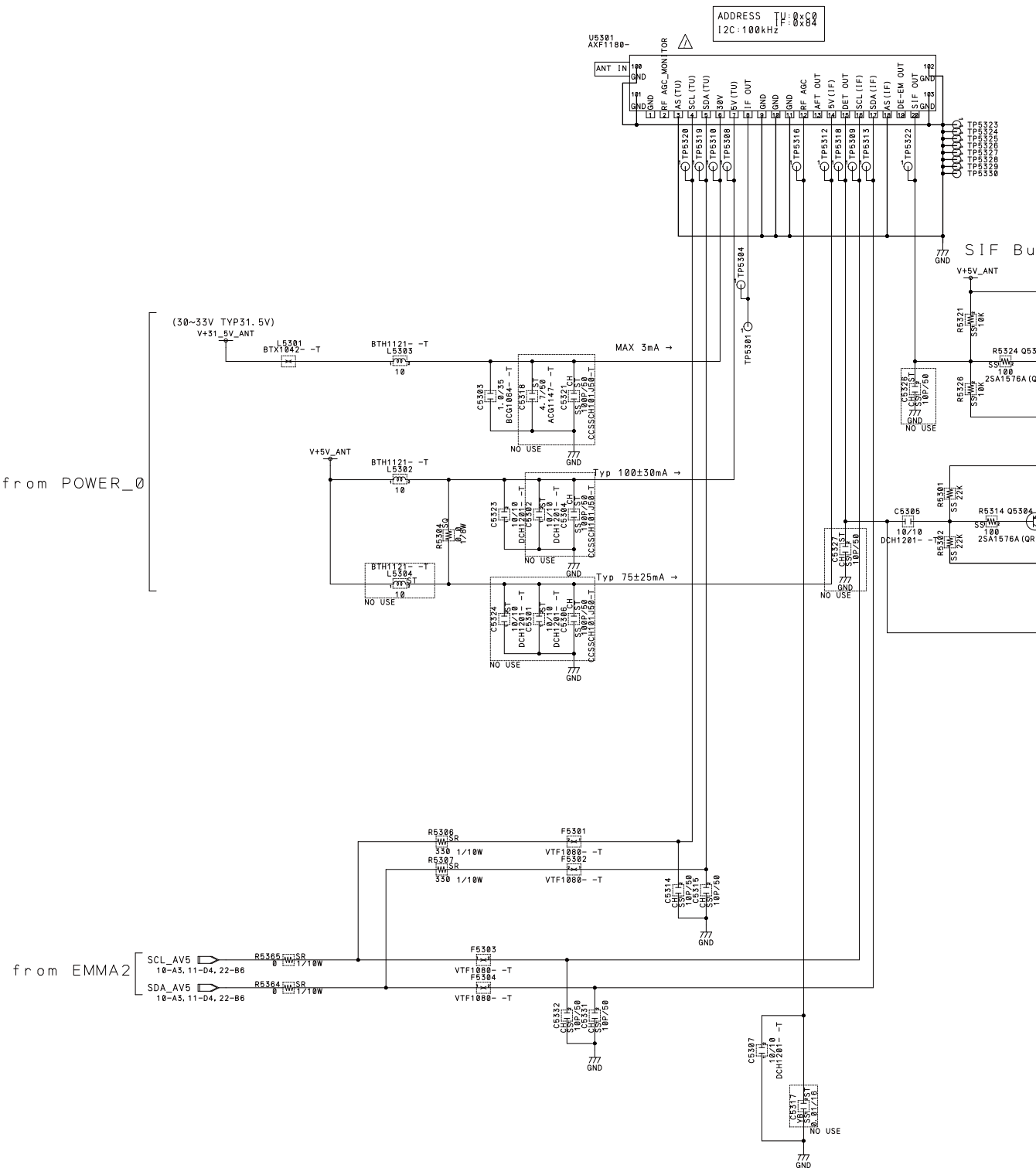
AWV2595- : AWW1431

8.12 MAIN BLOCK ASSY (12/24) [MSP BLOCK]



1 2 3 4

8.13 MAIN BLOCK ASSY (13/24) [A_TUNER BLOCK]



1 2 3 4

8.14 MAIN BLOCK ASSY (14/24) [VBI_SLICER BLOCK]

A

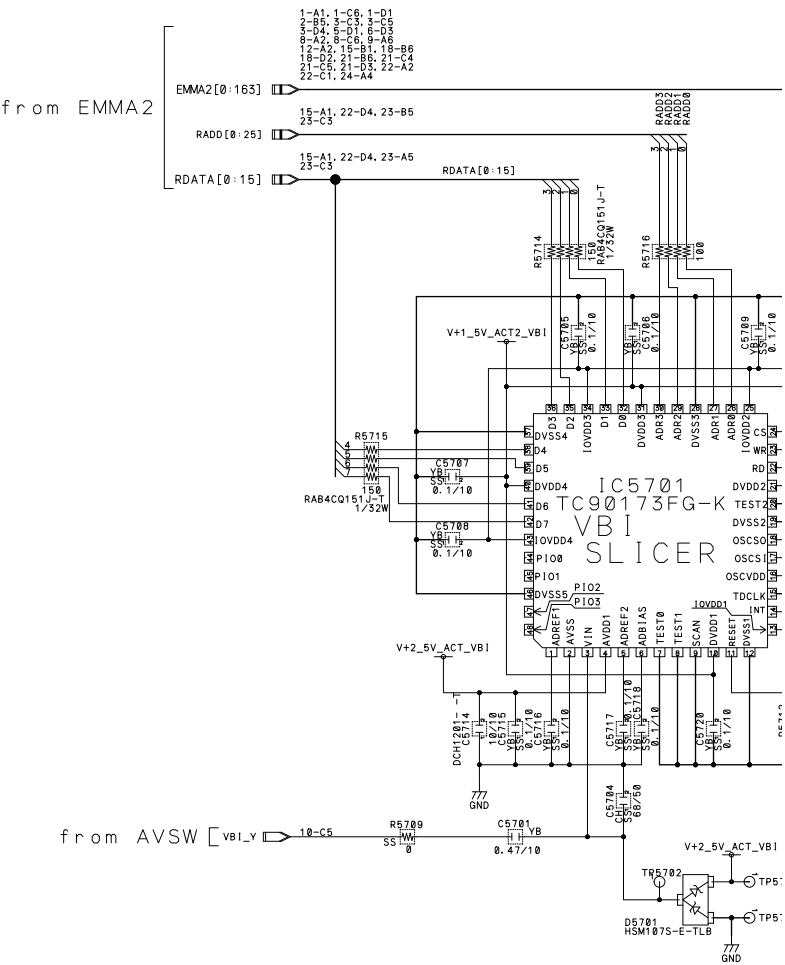
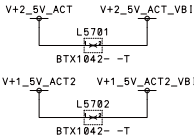
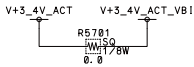
B

C

D

E

F



4

F



A

B

C

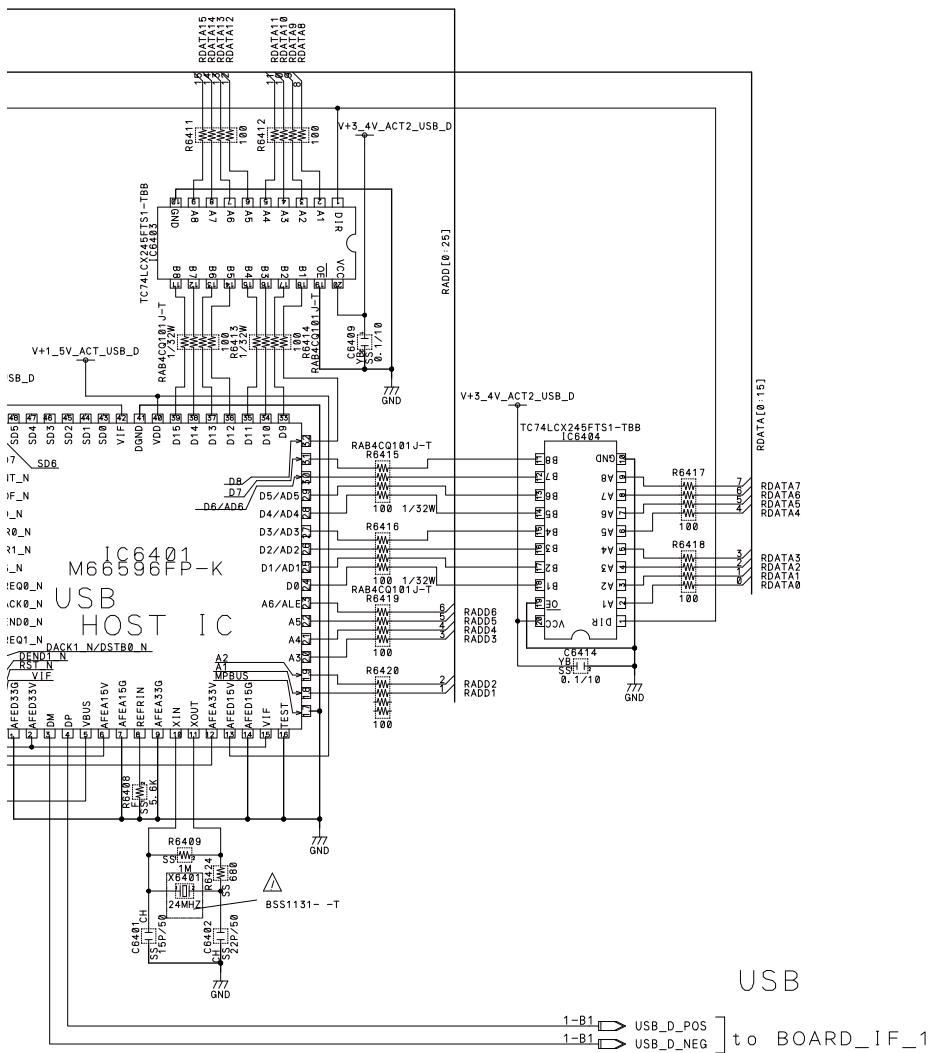
D

E

F

MODEL

ITEM	USED	VACANT
R	6401-6425	
C	6401-6414	
IC	6401-6404	
L	6401-6403	
X	6401	



The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

MAIN ASSY (MR_1BD) (15/25)
USB BLOCK

AWV2595- : AWW1431

1 2 3 4

8.16 MAIN BLOCK ASSY (16/24) [AV_IO_0 BLOCK]

A

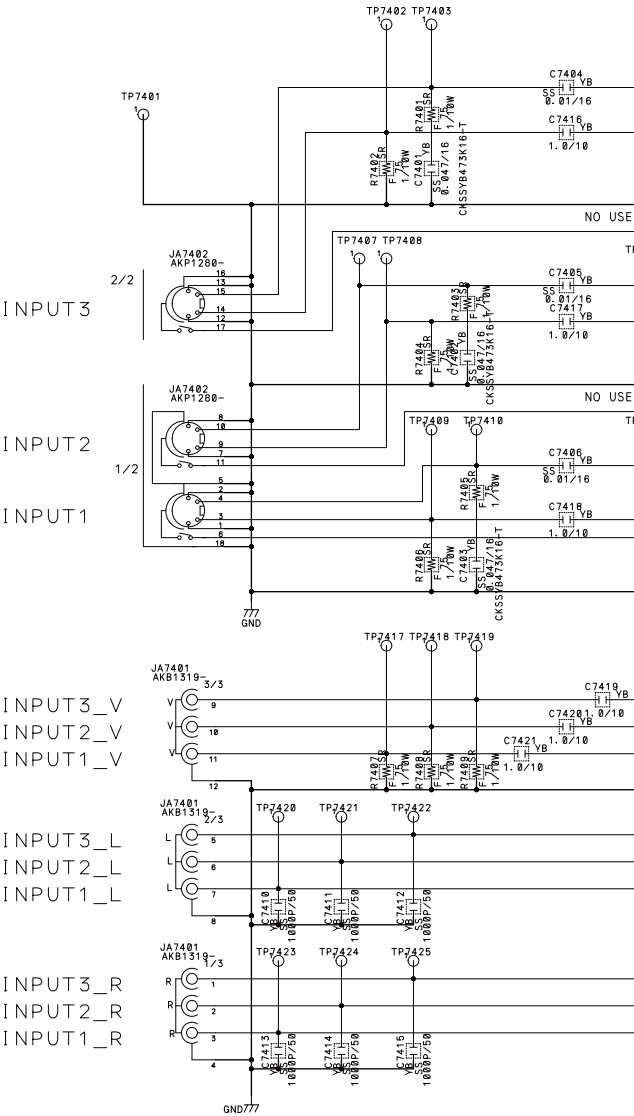
B

C

D

E

F



A

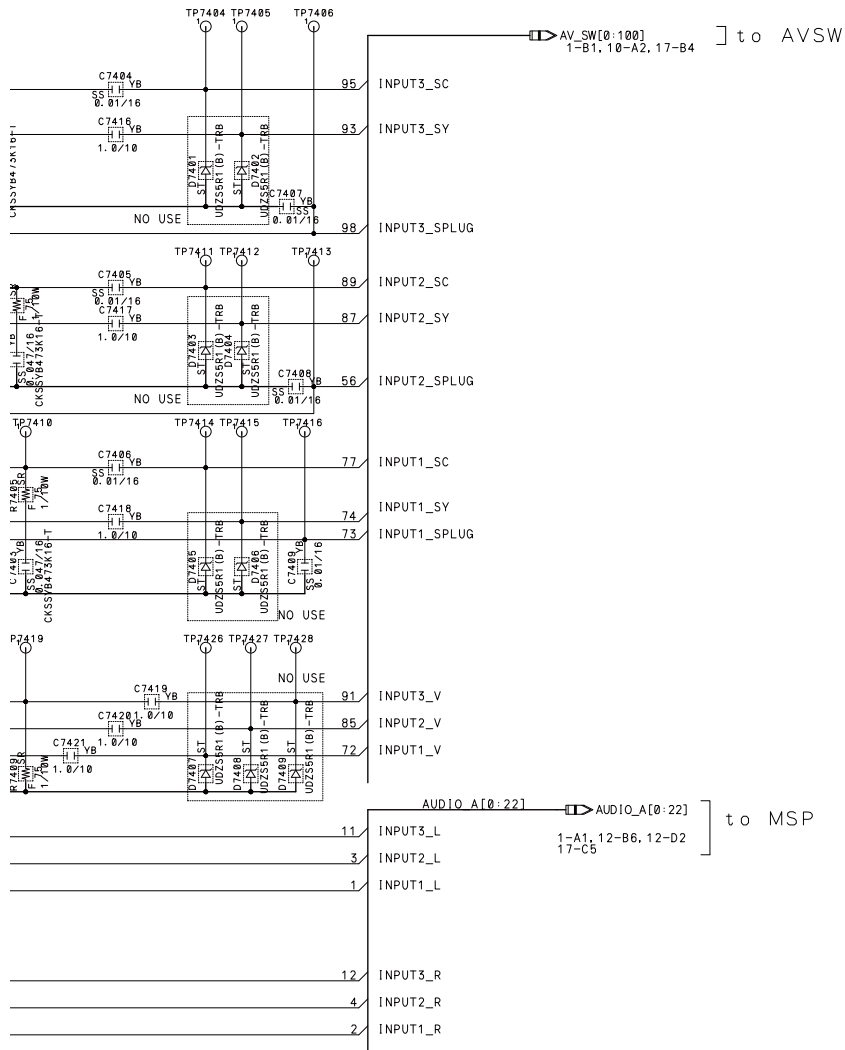
B

C

D

E

F



MODEL

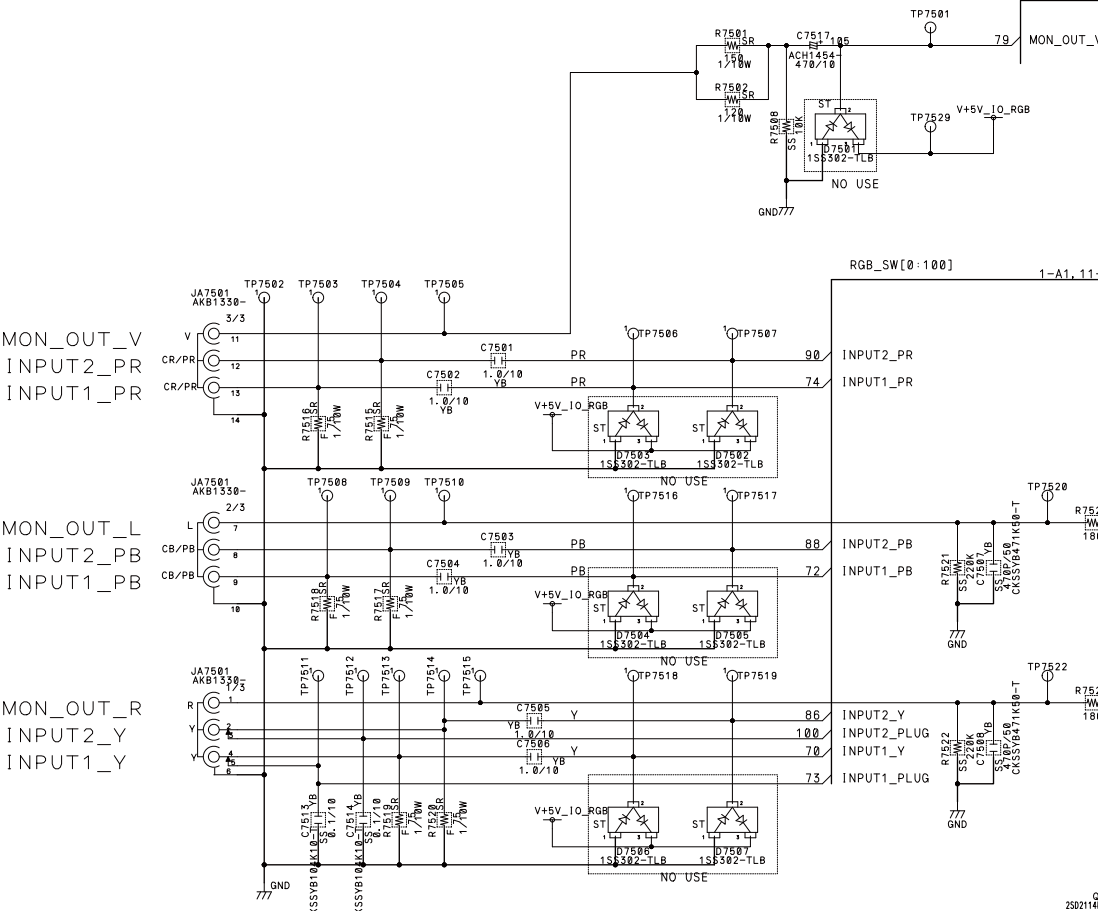
ITEM	USED	VACANT
R	7401-7409	
C	7401-7421	
D	7401-7409	7401-7409
JA	7401, 7402	

MAIN ASSY (MR_IBD) (16/25)
AV_IO_0 BLOCK

AWV2595- : AWW1431

8.17 MAIN BLOCK ASSY (17/24) [AV_IO_1 BLOCK]

MODEL		
ITEM	USED	VACANT
R	7501-7503, 7508, 7515-7528, 7581, 7582	7581, 7582
C	7501-7508, 7513-7517, 7534-7536	
Q	7502, 7505, 7506	
F	7501-7503	
D	7501-7507	7501-7507
JA	7501, 7503	

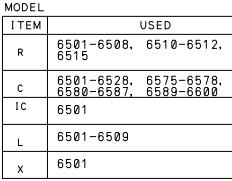


F



△

F



8.19 MAIN BLOCK ASSY (19/24) [ARIA_1 BLOCK]

A

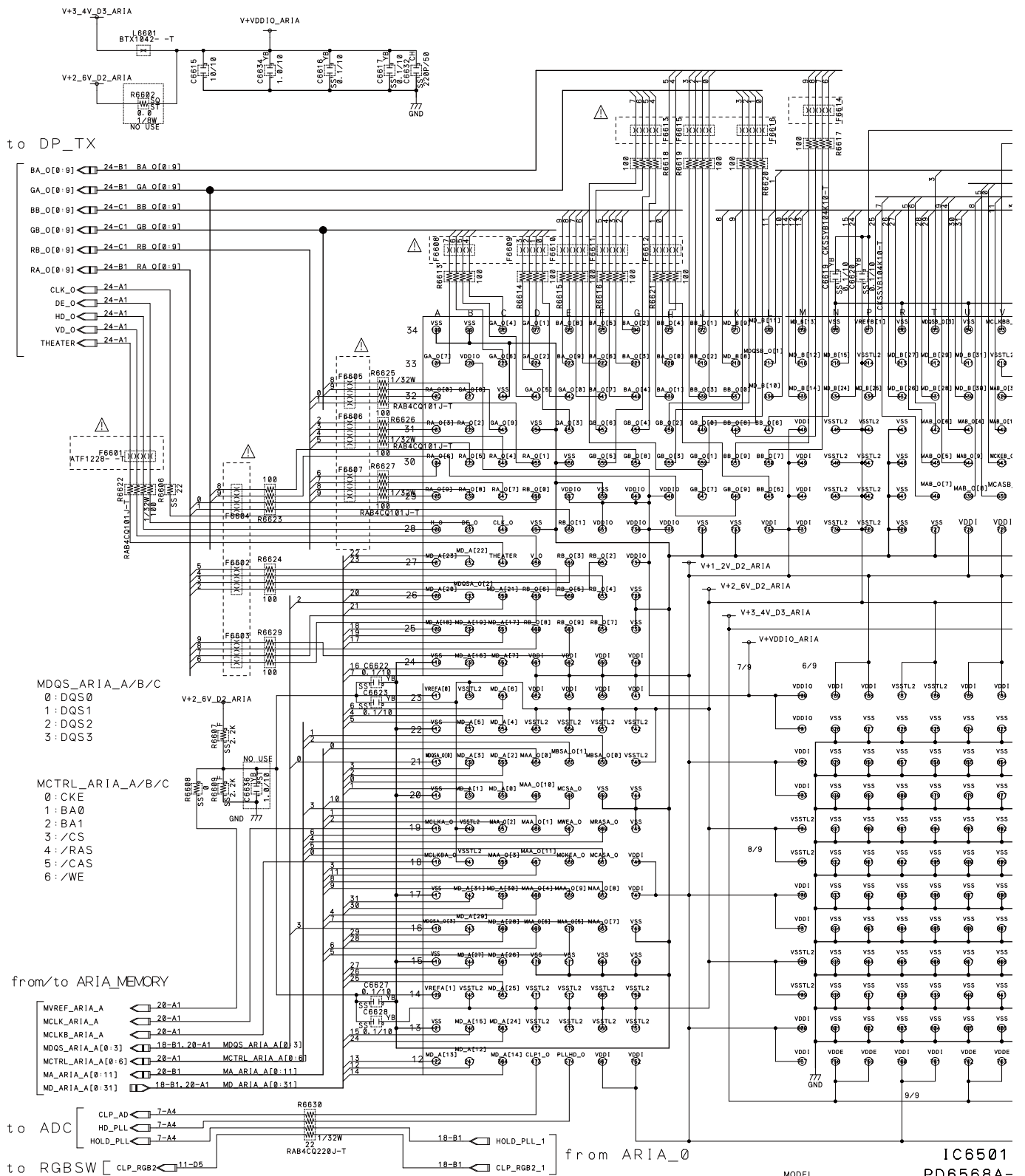
B

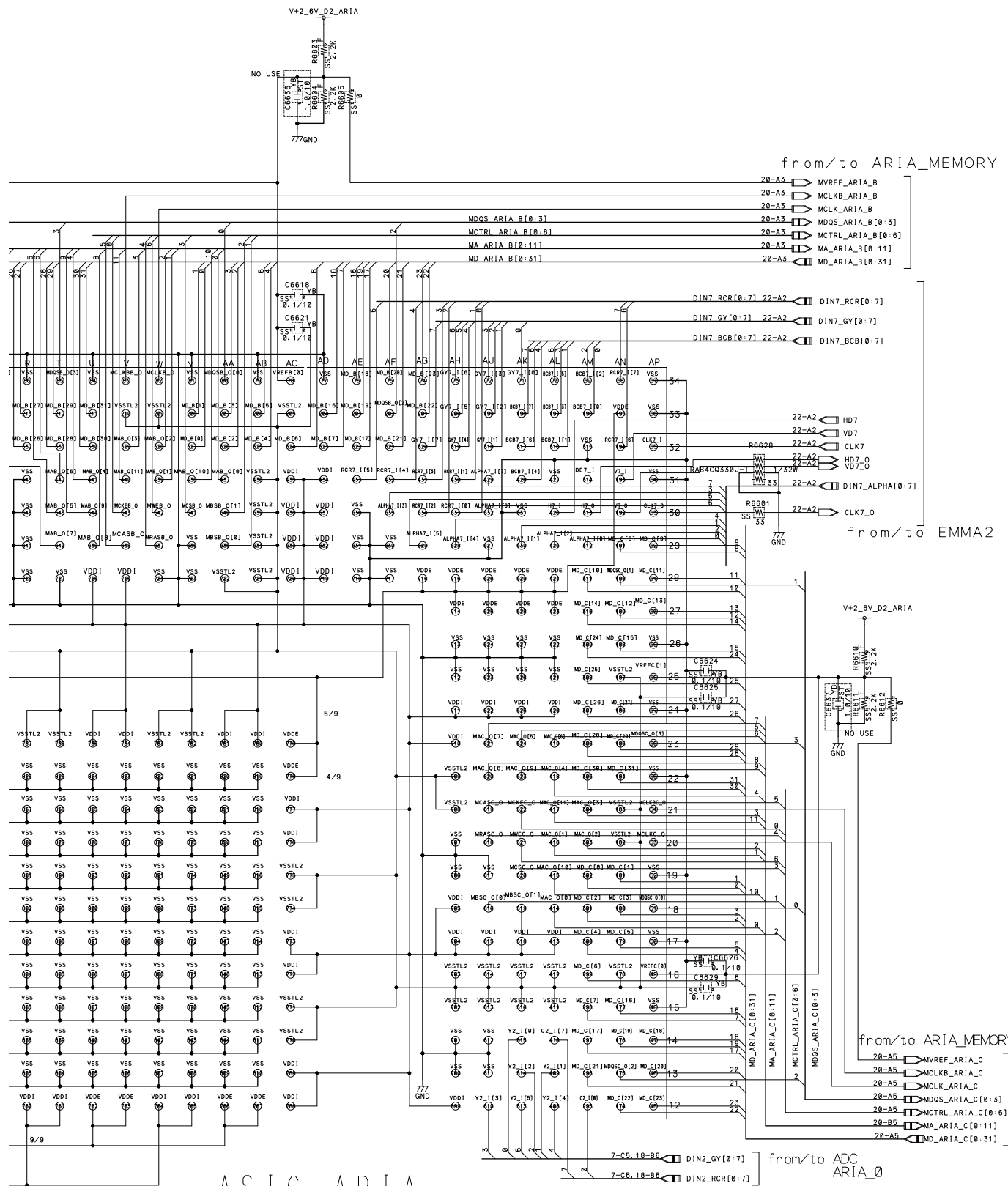
C

D

E

F





MAIN ASSY (MR_1BD) (19/25)
ARIA_1 BLOCK

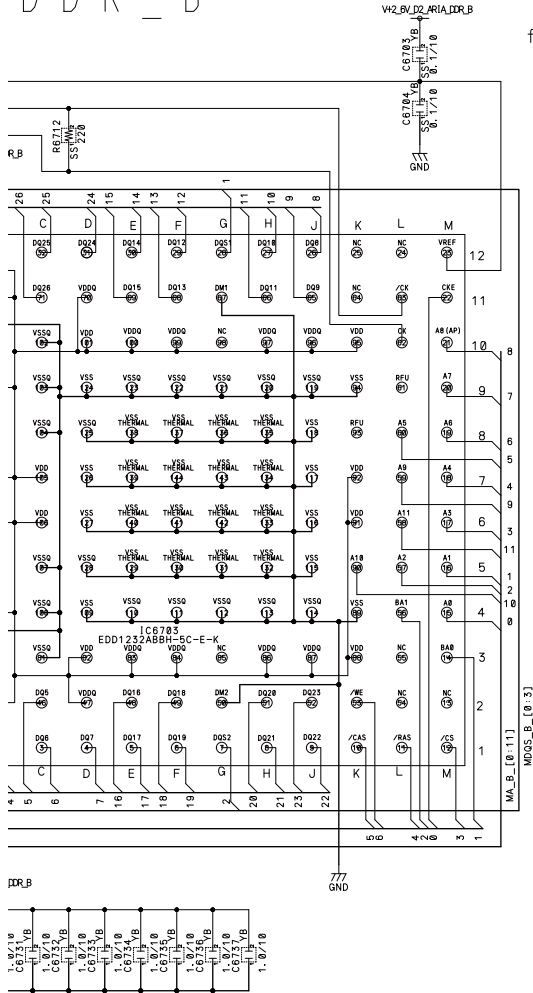
AWV2595- : AWW1431

4

F



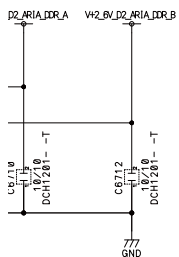
DDR_B



IC6702, 6703, 6704 SUB PARTS

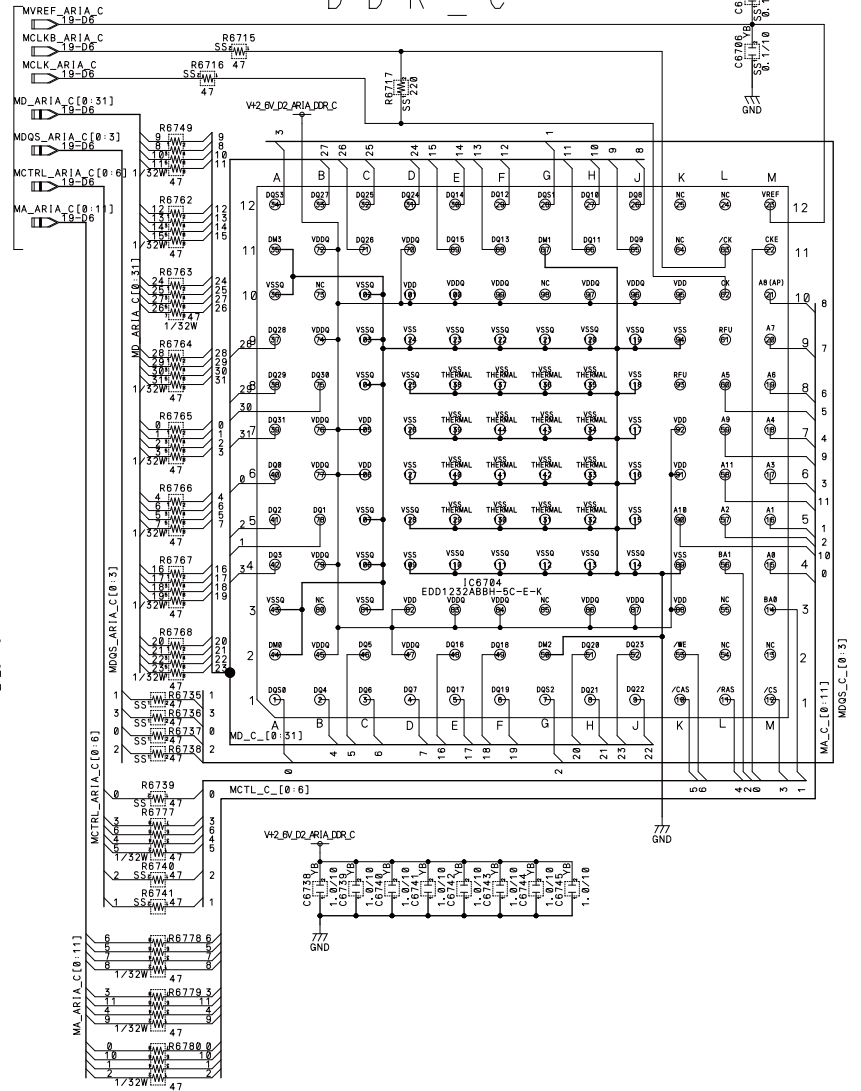
1st EDD1232ABBH-5C-E-K

2nd K4D263238K-VC50-K



from/to ARIA_1

DDR_C



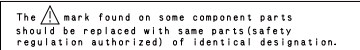
MODEL	USED	VACANT
ITEM		
R	6705-6707, 6710-6712, 6715-6717, 6720-6741, 6743-6780	6744
C	6701-6708, 6718, 6712, 6714, 6716, 6722-6748	
IC	6701-6704	
L	6701-6703	

MAIN ASSY (MR_1BD) (20/25)
ARIA_MEM BLOCK

AWV2595- : AWW1431

△

F

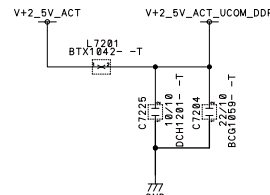






4

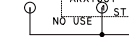
Timing diagram showing signals MCLK, MCLKB, and MDQ. MCLK and MCLKB are 22-B2 signals. MDQ is a 23-B2 signal. The diagram includes markers for SS (Serial Start) and W10 (Word 10) for each signal. The MDQ signal is shown as MDQ_EMA2[0:15].



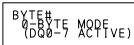
2nd K4H511638D-UCCC-K



from EMMA2
B2.23-A1 OWN
VREF_DDR_EMMA



32Mb i t



AWV2595- : AWW1431

△

E



8.25 FRONT_HDM_USB ASSY

A

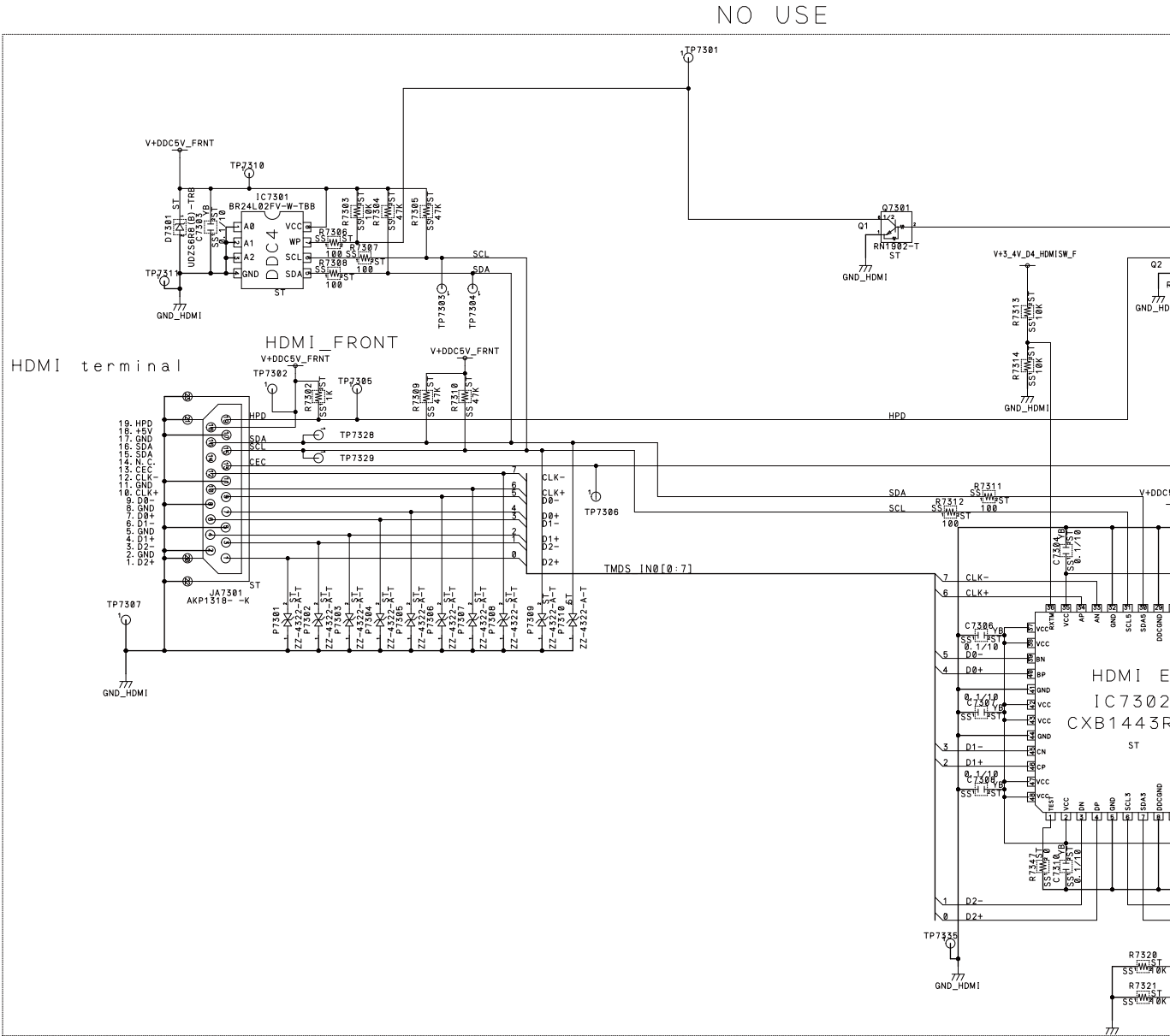
B

C

D

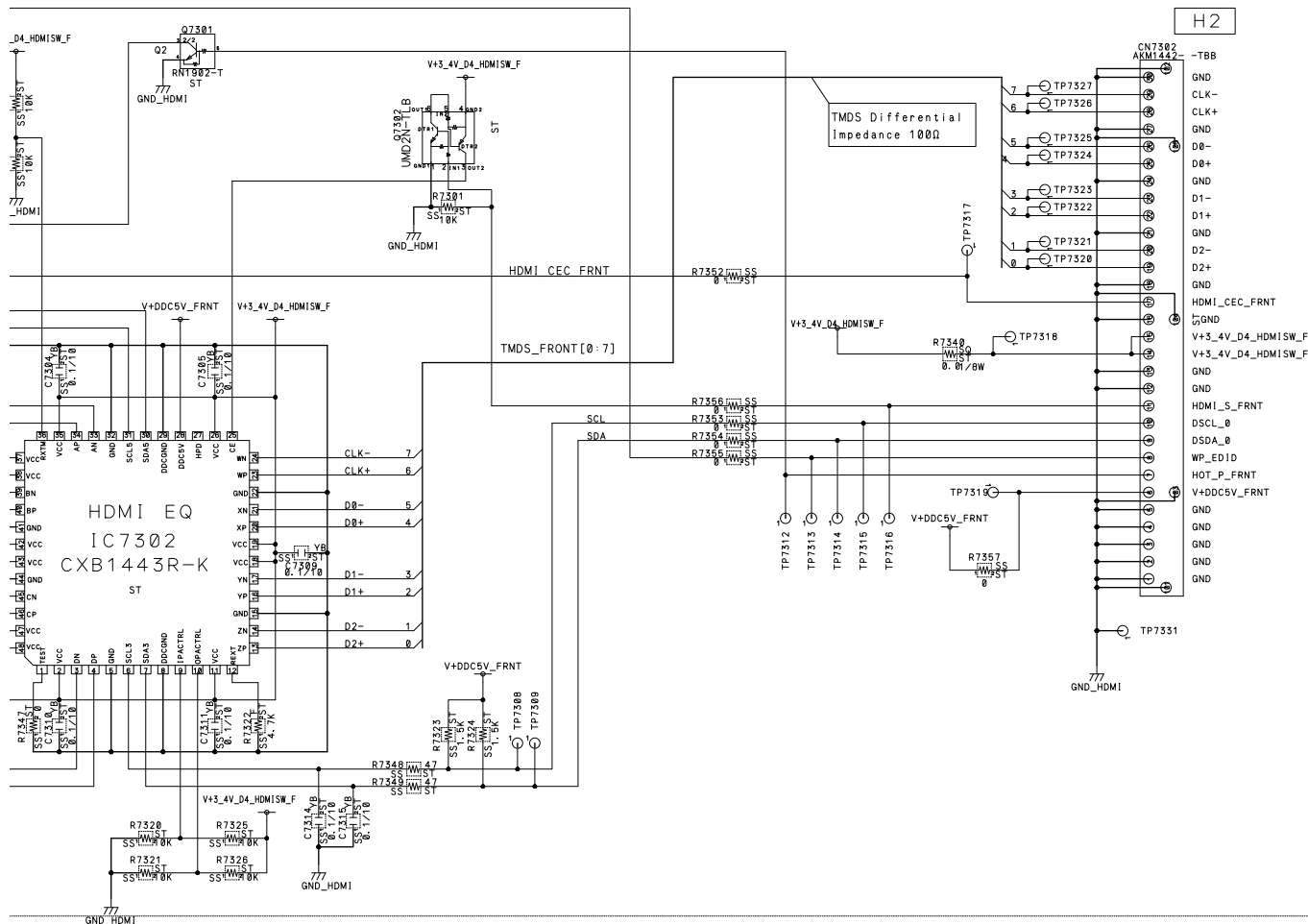
E

F



from/to MAIN Ass'y

H2



IN Ass'y

MODEL	USED	VACANT
ITEM		
R	7301-7314, 7320-7326, 7340, 7347-7349, 7352-7357	7301-7314, 7320-7326, 7340, 7347-7349, 7352-7357
C	7301, 7303-7311, 7314, 7315	7303-7311, 7314, 7315
Q	7301, 7302	7301, 7302
IC	7301, 7302	7301, 7302
JA	7301, 7303	7301
CN	7302, 7304	7302
L	7301-7303	7303
D	7301	7301
P	7301-7312	7301-7312

MAIN ASSY (MR_IBD) (25/25)
FRONT_HDMI_USB BLOCK

AWV2595- : AWW1432 (MR_IBD)

1

8.26 REAR IO ASSY

A

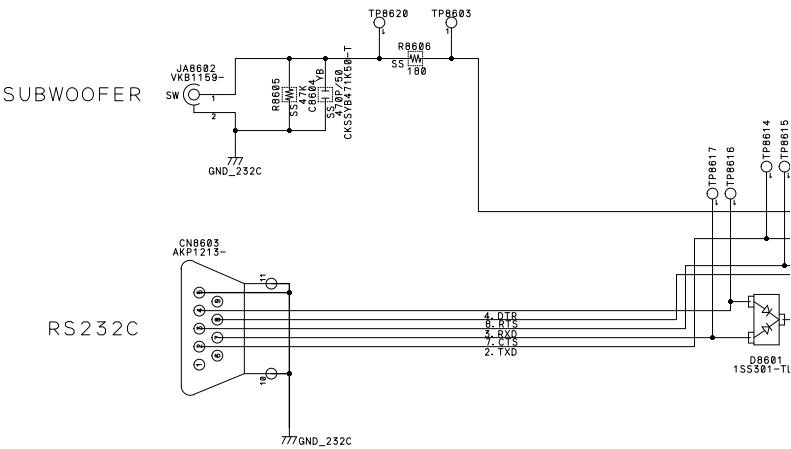
B

C

D

E

F



RS232C

PIN No.	SIGNAL
1	N. C
2	TXD
3	RXD
4	DTR
5	GND
6	N. C
7	CTS
8	RTS
9	N. C

NOTES

RESISTORS

SS RS1/16SS***J-T

CAPACITORS

SS YB CKSSYB***K**-T

DIODE



1SS381-TLB
*MC2845-11-TLB
*DAN282U-TLB

A

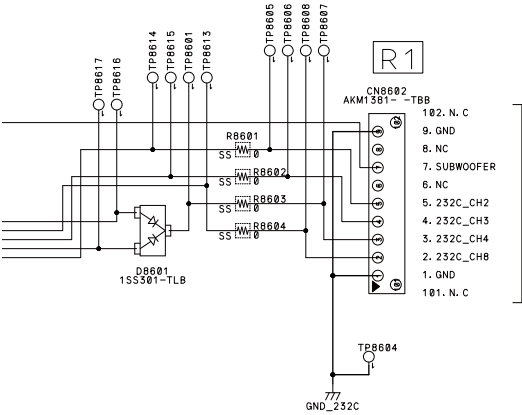
B

C

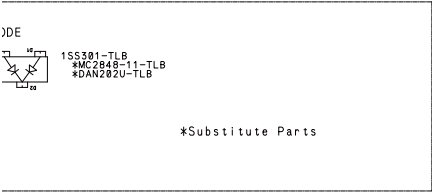
D

E

F



from/to MAIN_ASS'Y



MODEL		
ITEM	USED	VACANT
R	8601-8606	
C	8604	
Q		
IC		
S		
JA	8602	
L		
D	8601	
CN	8602, 8603	

EUKUGOU ASSY (MR_1BD) (1/3)
REAR_TO ASSY
AWY2586-
AWY1481

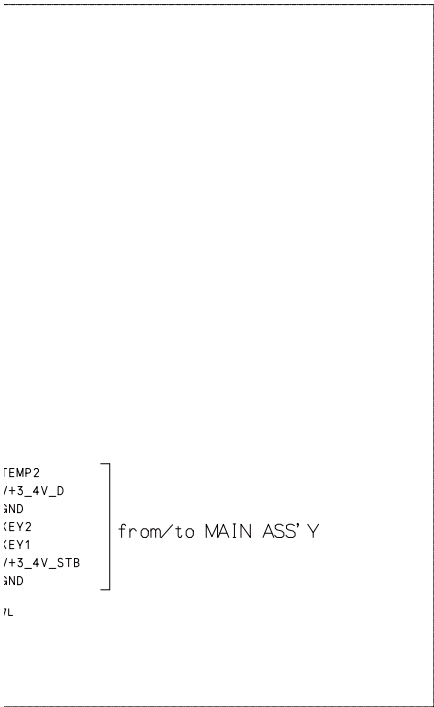
A



MAIN ASS'Y


B

C



TEMP2
/+3_4V_D
IND
EY2
EY1
/+3_4V_STB
IND
IL

from/to MAIN ASS'Y

The  mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.

D

E

MODEL		
ITEM	USED	VACANT
R	9401-9405, 9407-9419	9405, 9410, 9419
C	9401-9413	9401-9403, 9405, 9408, 9412, 9413
Q	9401	
IC		
S	9401-9406	
TH	9401	
L	9401-9410	9407
D	9401-9403	
CN	9401, 9402	

FUKUGOU ASS'Y (MR_IBD) (2/3)
REV ASS'Y
AWV2596-
AWW1227
AWW1246

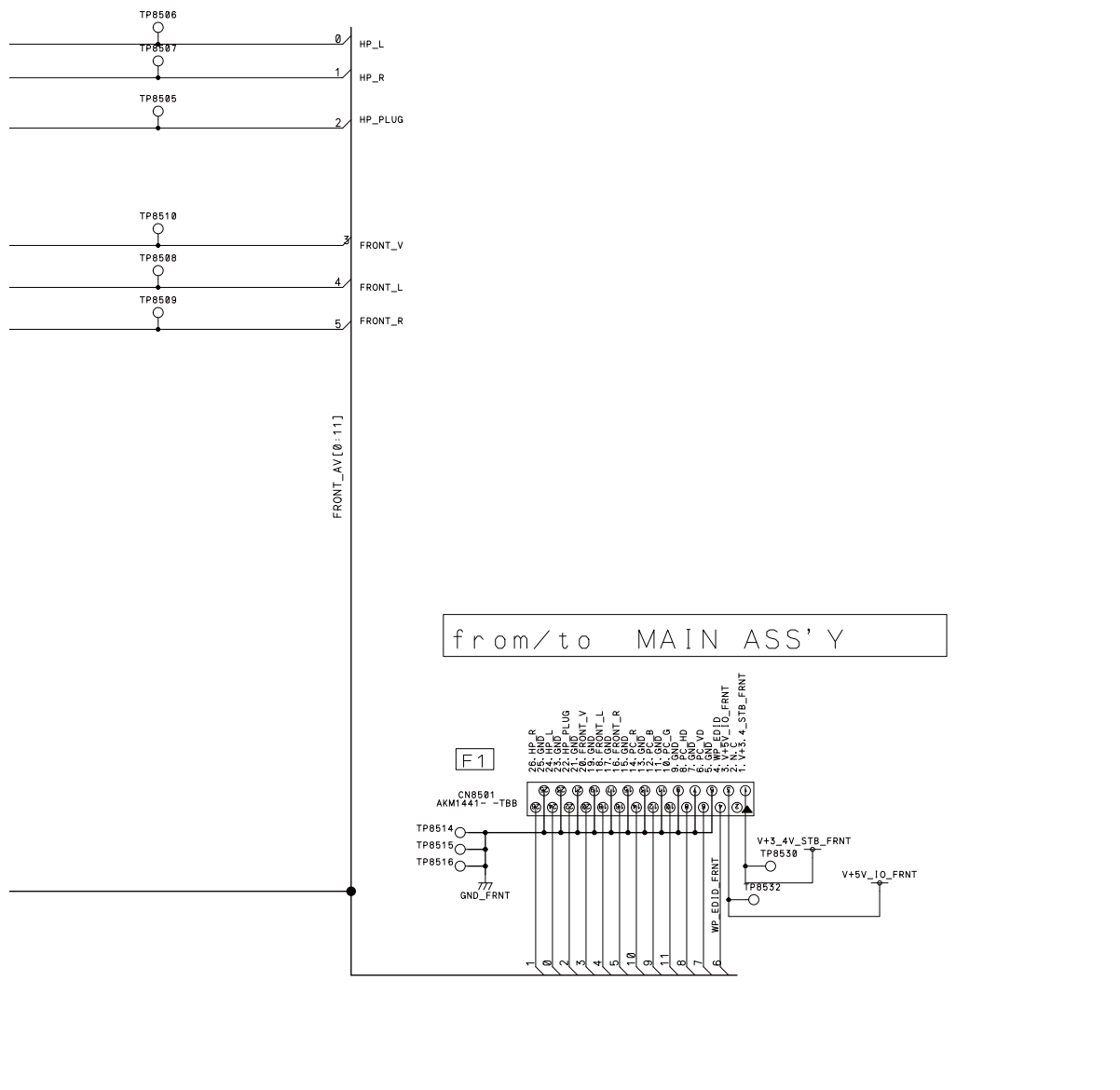
F

4

F



Y AWW1443



NOTES

RESISTORS CAPACITORS
SS RS1/16SS***J-T SS YB CKSSYB***K*-T
 RST RST1/2SP***J-T YB CKSRYB***K*-T
F RS1/10SR***F-T
 RAB4CQ***J-T

MODEL		
ITEM	USED	VACANT
R	8501-8504, 8506-8512, 8514-8527	
C	8501-8515	8505, 8506, 8509
Q	8501-8504	
IC	8501, 8502	
F		
JA	8501, 8503	
L	8501, 8502	8501, 8502
D	8501-8509, 8511	8501-8506, 8509, 8511
CN	8501, 8503	

EUKUGOV ASS'Y (MR_1BD) (3/3)
FRONT ASS'Y

AWW2596-
AWW1443

1 2 3 4

8.29 VOLTAGES AND WAVEFORMS

[1] VOLTAGES

A

MAIN BLOCK Assy		FRONT_HDM_USB Assy	
M13 CN4004 (AKM1276- -TBB)		Voltage (V)	H1 CN7304 (AKM1291- -TBB)
NO.	Name		Name NO.
1	SHIELD	0	SHIELD 1
2	GND	0	GND 2
3	D+	0	D+ 3
4	D-	0	D- 4
5	VBUS	5.1	VBUS 5

MAIN BLOCK Assy		REAR IO Assy	
M16 CN4002 (AKM1378- -TBB)		Voltage (V)	R1 CN8602 (AKM1381- -TBB)
NO.	Name		Name NO.
1	GND	0	GND 9
2	N.C.	0	N.C. 8
3	SUBWOOFER	0	SUBWOOFER 7
4	N.C.	0	N.C. 6
5	232C_CH2	-5.5	232C_CH2 5
6	232C_CH3	-8.3	232C_CH3 4
7	232C_CH4	0	232C_CH4 3
8	232C_CH8	5.6	232C_CH8 2
9	GND	0	GND 1

B

MAIN BLOCK Assy		LED Assy	
M2 CN4204 (AKW1343- -TBB)		Voltage (V)	L1 CN9402 (KM200NA6L)
NO.	Name		Name NO.
1	OPEN	0	
2	OPEN	0	
3	TEMP2	2.1	
4	GND	0	
5	KEY1	3.4	
6	GND	0	
7	LED-	0	LED- 6
8	LED_TIMER	3.3/0	LED_TIMER 4
9	LED_ON	2.8/0	LED_ON 2
10	OPEN	0	
11	OPEN	0	
12	LED-	0	LED- 1
13	LED_OFF	3.3/0	LED_OFF 3
14	LED_MODEM(LED-)	0	LED_MODEM 5
15	OPEN	0	
16	V+3_4V_STB	3.4	
17	KEY2	3.4	
18	V+3_4V_D	3.3	
19	OPEN	0	
20	OPEN	0	

MAIN BLOCK Assy		KEY Assy	
M2 CN4204 (AKW1343- -TBB)		Voltage (V)	K1 CN9401 (KM200NA7L)
NO.	Name		Name NO.
1	OPEN	0	
2	OPEN	0	
3	TEMP2	2.1	TEMP2 7
4	GND	0	GND 5
5	KEY1	3.4	KEY1 3
6	GND	0	GND 1
7	LED-	0	
8	LED_TIMER	3.3/0	
9	LED_ON	2.8/0	
10	OPEN	0	
11	OPEN	0	
12	LED-	0	
13	LED_OFF	3.3/0	
14	LED_MODEM(LED-)	0	
15	OPEN	0	
16	V+3_4V_STB	3.4	V+3_4V_STB 2
17	KEY2	3.4	KEY2 4
18	V+3_4V_D	3.3	V+3_4V_D 6
19	OPEN	0	
20	OPEN	0	

C

D

MAIN BLOCK Assy		FAN	
M31 CN4201 (AKM1276- -TBB)		Voltage (V)	
NO.	Name		Name NO.
1	N.C.	0	
2	FAN_VCC2	7.0/8.9	VCC
3	FAN_NEG2	0.1	NG
4	GND	0	GND
5	N.C.	0	

E

F

MAIN BLOCK Assy

FRONT IO Assy

MAIN BLOCK Assy

POWER SUPPLY Unit

M12 CN4003 (AKM1441- -TBB)		Voltage (V)	F1 CN8501 (AKM1441- -TBB)	
NO.	Name		Name	NO.
1	HP_R	2.1	HP_R	26
2	GND	0	GND	25
3	HP_L	2.1	HP_L	24
4	GND	0	GND	23
5	HP_PLUG	0/3.1	HP_PLUG	22
6	GND	0	GND	21
7	FRONT_V	2.5	FRONT_V	20
8	GND	0	GND	19
9	FRONT_L	-0.2 / 0.2	FRONT_L	18
10	GND	0	GND	17
11	FRONT_R	-0.2 / 0.2	FRONT_R	16
12	GND	0	GND	15
13	PC_R	1.8	PC_R	14
14	GND	0	GND	13
15	PC_B	1.8	PC_B	12
16	GND	0	GND	11
17	PC_G	1.8	PC_G	10
18	GND	0	GND	9
19	PC_HD	0/3.4	PC_HD	8
20	GND	0	GND	7
21	PC_VD	0/3.4	PC_VD	6
22	GND	0	GND	5
23	WP_EDID	0	WP_EDID	4
24	V+5V_IO_FRONT	5.0	V+5V_IO_FRONT	3
25	N.C	0	N.C	2
26	V+3_4V_STB_FRONT	3.4	V+3_4V_STB_FRONT	1

M1 CN4203 (AKM1440-)		Voltage (V)	P2 (B26B-PNDZ-1)		Voltage (V)
NO.	Name		Name	NO.	
1	V+17V	19.1	V+5_1V_STB	26	4.9
2	V+5_1V_STB	4.9	V+17V	25	19.1
3	GND	0	GND	24	0
4	GND	0	GND	23	0
5	V+12V	13.0	V+12V	22	13.0
6	V+12V	13.0	V+12V	21	13.0
7	GND	0	GND	20	0
8	GND	0	GND	19	0
9	V+6_5V	6.6	V+6_5V	18	6.6
10	V+6_5V	6.6	V+6_5V	17	6.6
11	V+6_5V	6.6	V+6_5V	16	6.6
12	V+6_5V	6.6	V+6_5V	15	6.6
13	GND	0	GND	14	0
14	GND	0	GND	13	0
15	GND	0	GND	12	0
16	GND	0	GND	11	0
17	V+3_4V_STB	3.4	V+3_4V_STB	10	3.4
18	V+3_4V_STB	3.4	V+3_4V_STB	9	3.4
19	V+3_4V_STB	3.4	V+3_4V_STB	8	3.4
20	V+3_4V_STB	3.4	V+3_4V_STB	7	3.4
21	GND	0	V+3_4V_STB	6	3.4
22	V+3_4V_STB	3.4	GND	5	0
23	PD_TRG	0	GND	4	0
24	GND	0	PD_TRG	3	0
25	AC_DET	3.1	RELAY	2	3.1
26	RELAY	3.2	AC_DET	1	3.2

[2] WAVEFORMS

Refer to the section “3.2 DIAGNOSIS FLOWCHART OF FAILURE ANALYSIS” .

9. PCB CONNECTION DIAGRAM

9.1 MAIN BLOCK AND FRONT_HDM_USB ASSYS

A

SIDE A

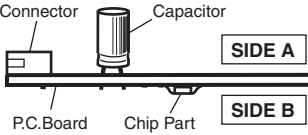
MAIN BLOCK ASSY

NOTE FOR PCB DIAGRAMS :

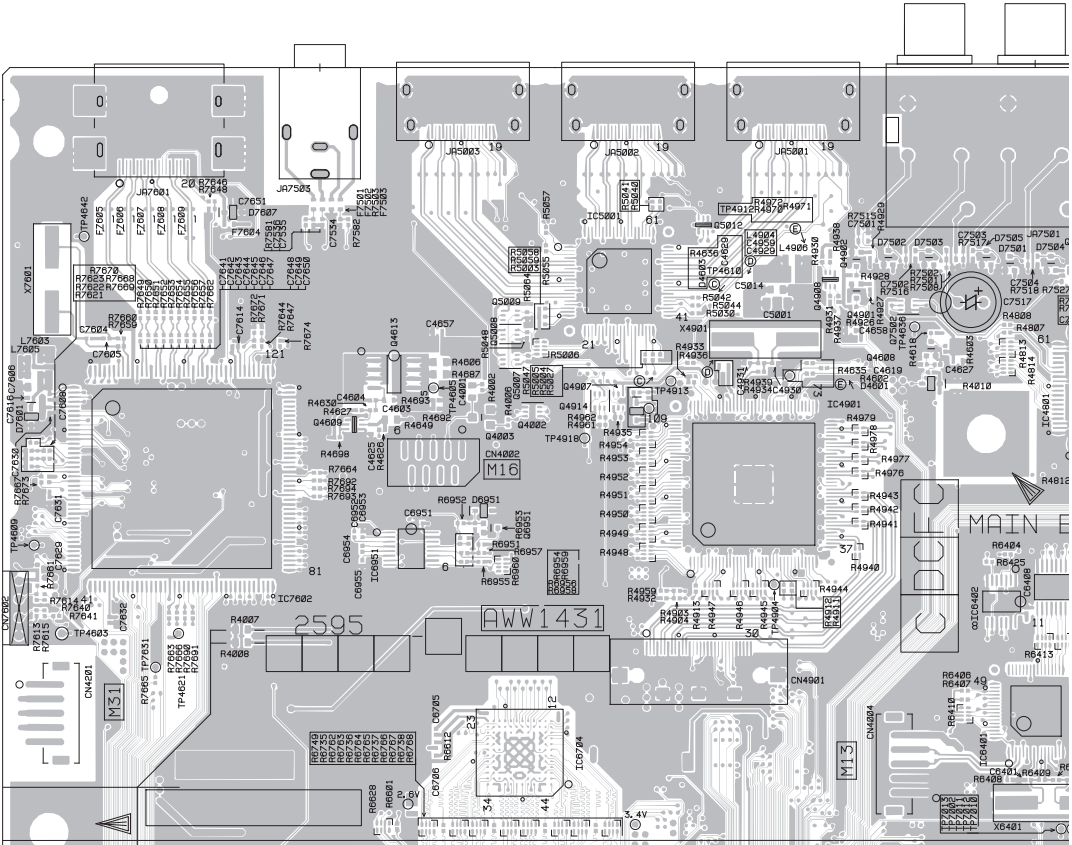
1. The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

B

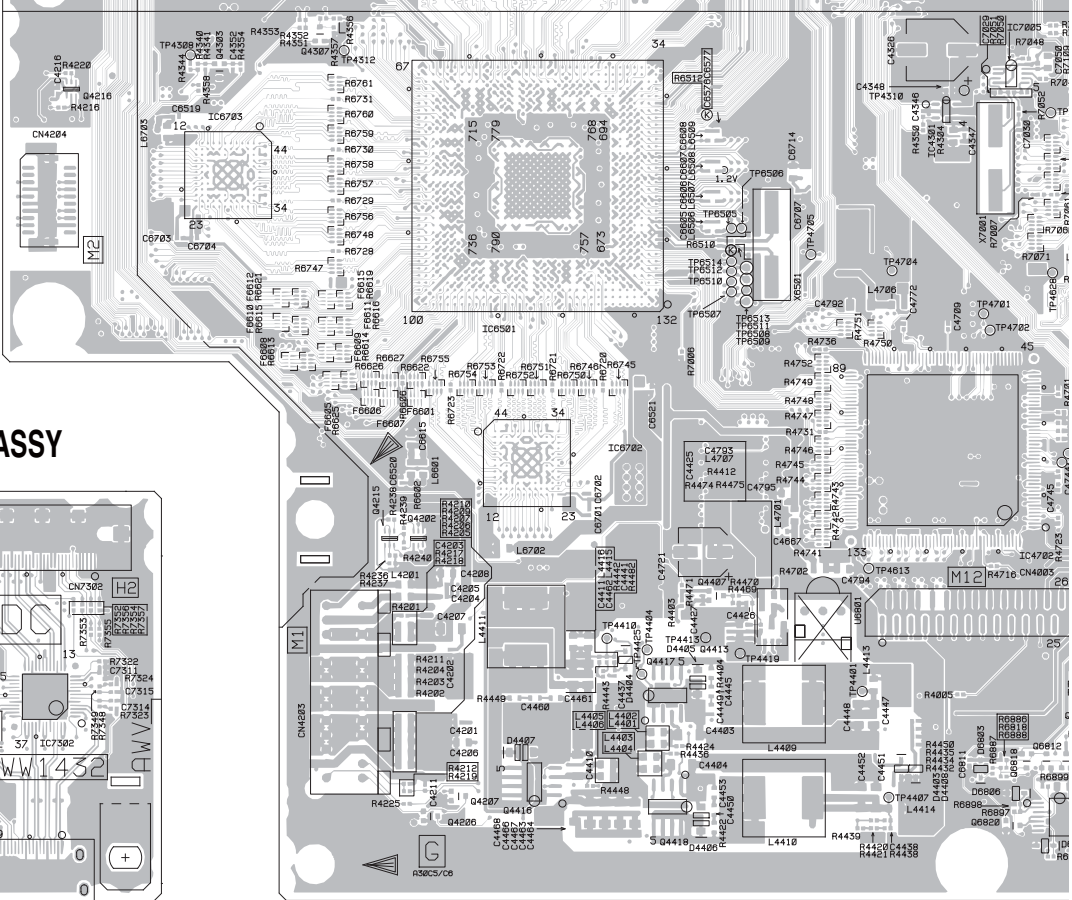
2. View point of PCB diagrams.



C

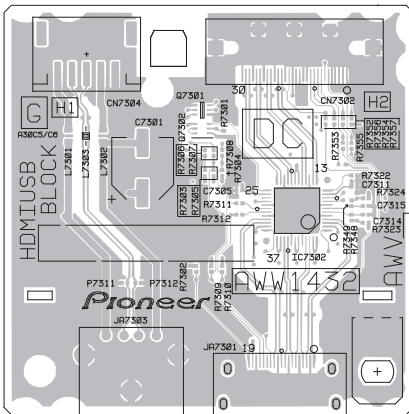


D



FRONT_HDM_USB ASSY

E



F

(ANP2227-A)

SIDE A

A

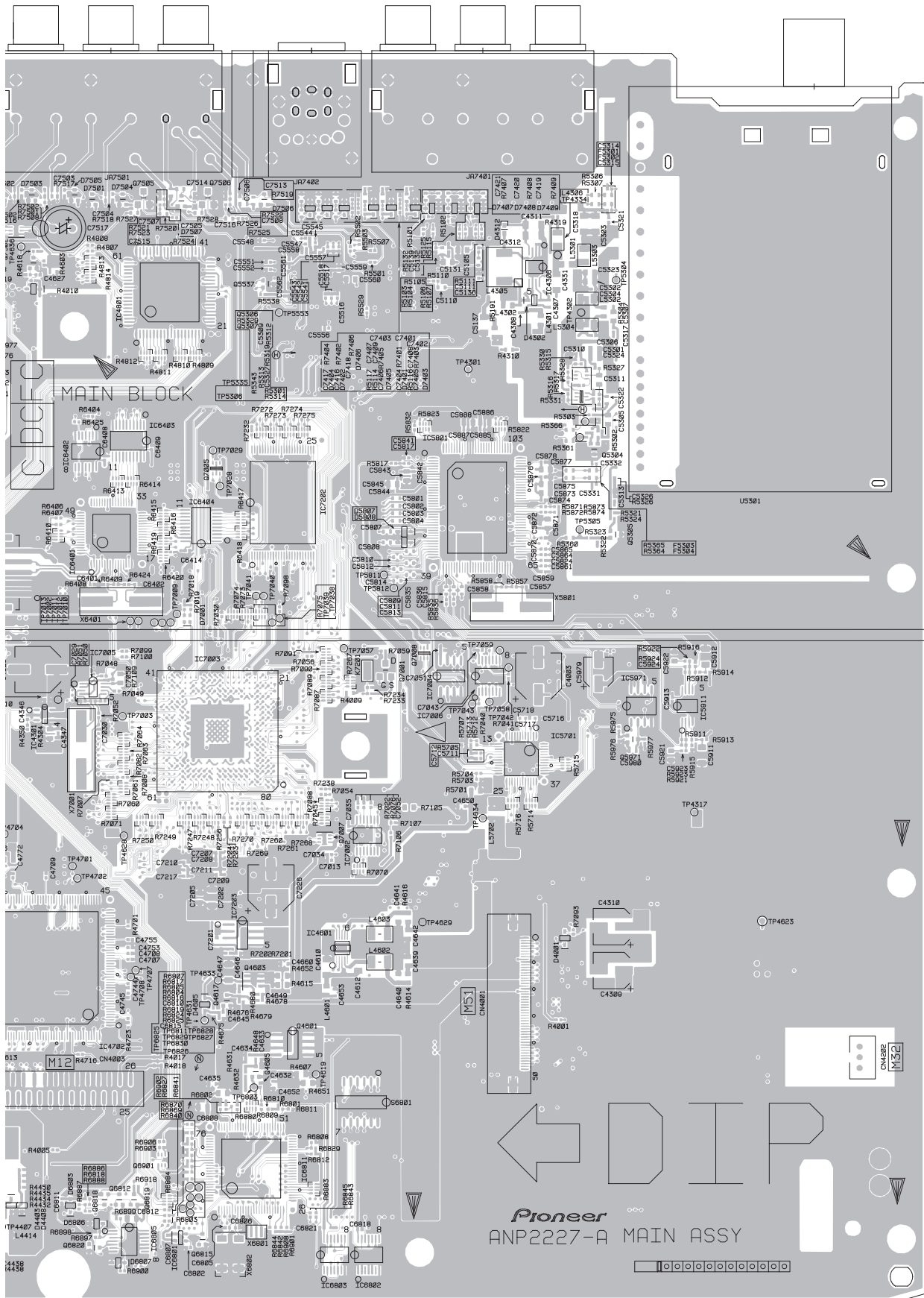
B

C

D

E

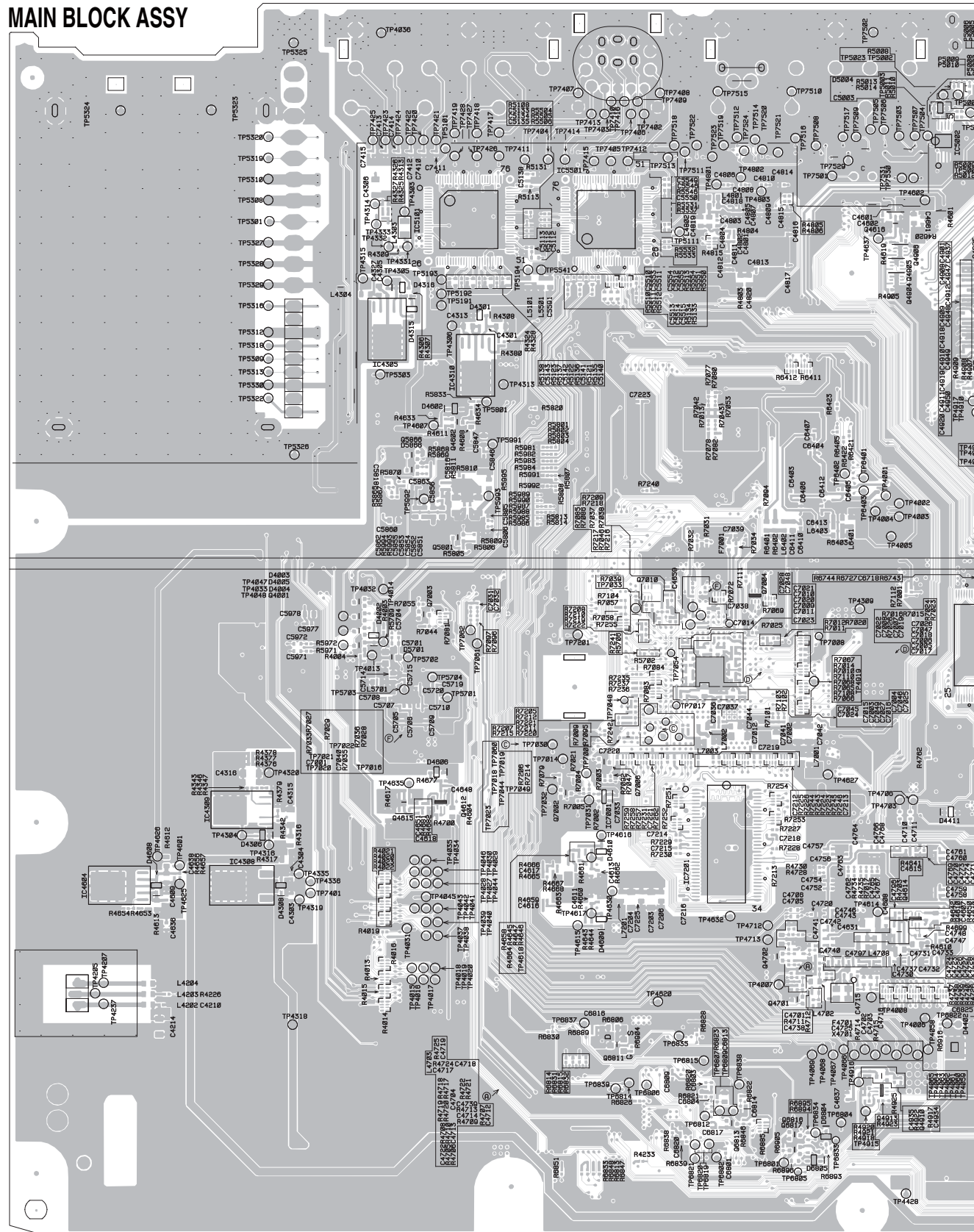
F



(ANP2227-A)

SIDE B

MAIN BLOCK ASSY



KRP-M01

SIDE B

A

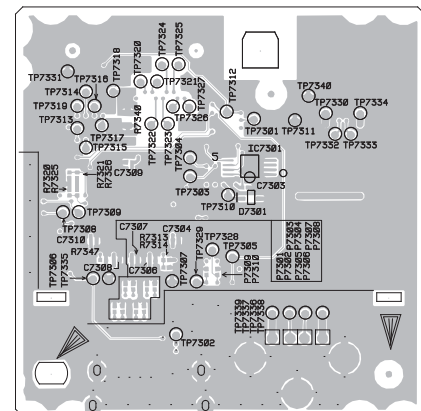
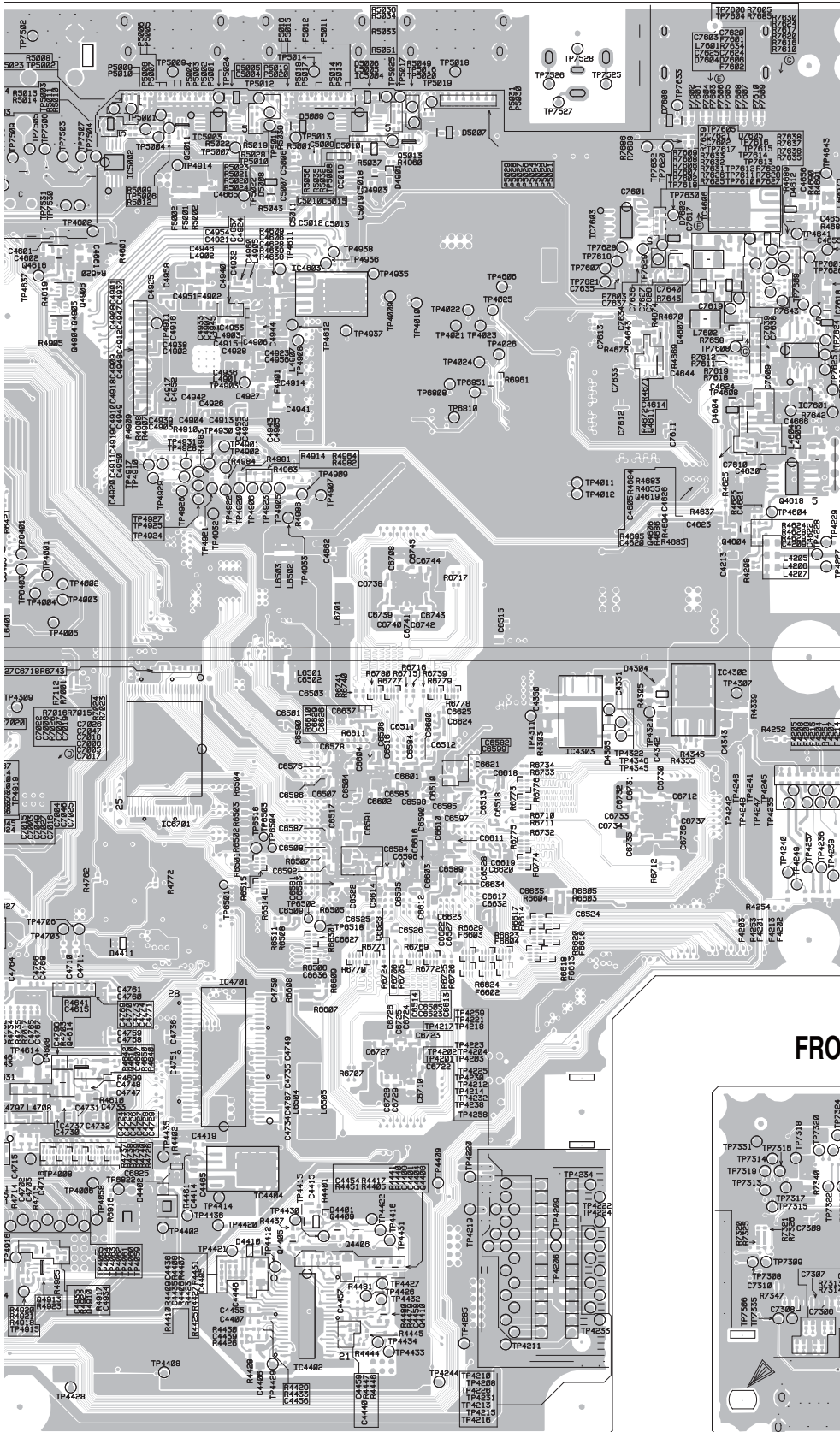
B

C

D

E

F



(ANP2227-A)


(ANP2227-A)

KRP-M01

SIDE A


KRP-M01

10. PCB PARTS LIST

- NOTES:
- Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
 - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).
- | | | | | | | | | | | |
|-------|---|----------------------|-------|------|-------|---------|---|---|---|---|
| 560 Ω | → | 56 × 10 ¹ | → | 561 | ..... | RD1/4PU | 5 | 6 | 7 | J |
| 47 kΩ | → | 47 × 10 ³ | → | 473 | ..... | RD1/4PU | 4 | 7 | 3 | J |
| 0.5 Ω | → | R50 | ..... | RN2H | R | 5 | 0 | K | | |
| 1 Ω | → | 1R0 | ..... | RS1P | 7 | R | 0 | K | | |
- Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
- | | | | | | | | | | | | |
|---------|---|-----------------------|---|------|-------|---------|---|---|---|---|---|
| 5.62 kΩ | → | 562 × 10 ¹ | → | 5621 | | RN1/4PC | 5 | 6 | 2 | 1 | F |
|---------|---|-----------------------|---|------|-------|---------|---|---|---|---|---|
- Meaning of the figures and others in the parentheses in the parts list.
- Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
- IC 301 (A, 91, 111) IC NJM2068V

Mark No. Description Part No.

LIST OF ASSEMBLIES

NSP	1..MAIN ASSY (GC MR)	AWV2595
	2..MAIN BLOCK ASSY (GC MR)	AWW1431
	2..FRONT_HDM_USB ASSY (GC MR)	AWW1432
NSP	1..FUKUGO ASSY (GC MR)	AWV2596
	2..LED ASSY (EU MR)	AWW1442
	2..FRONT IO ASSY (EU MR)	AWW1443
	2..KEY ASSY (EU MR)	AWW1445
	2..REAR IO ASSY (GC MR)	AWW1461
	1..POWER SUPPLY UNIT	AXY1223

Mark No. Description Part No.

Unit Name: MAIN BLOCK ASSY(GC MR)
Block Name: BOARD_IF_0 BLOCK(GC)

SEMICONDUCTORS

Q 4001	2SA1576A
Q 4002	UMD2N
Q 4003	2SD2114K
D 4001,4002	1SS352
D 4003-4005	1SS301

MISCELLANEOUS

CN 4001 50P CONNECTOR	AKM1399
CN 4002 FFC CONNECTOR 9P	AKM1378
CN 4003 FFC CONNECTOR 26P	AKM1441
CN 4004 CONNECTOR	AKM1276

RESISTORS

R 4013,4016	RAB4CQ101J
R 4014,4015,4020,4022	RAB4CQ220J
R 4021	RAB4CQ0R0J
R 4023	RAB4CQ220J
Other Resistors	RS1/16SS###J

CAPACITORS



C 4001	DCH1201
C 4003	ACH1421

Block Name: BOARD_IF_1 BLOCK(GC)

SEMICONDUCTORS

Q 4202	RN1902
Q 4206,4207	DTC124EUA
Q 4215	HN1A01FU
Q 4216	RN2902

MISCELLANEOUS

L 4201 CHIP BEEDS FILTER	BTX1039
 L 4205-4207 CHIP BEEDS FILTER	BTX1042
 F 4201-4205,4207-4209 INDUCTOR	CTF1557
 F 4213-4215 INDUCTOR	CTF1557
CN 4201 CONNECTOR	AKM1276

RESISTORS

R 4201-4207,4209-4211	RS1/8SQ0R0J
R 4217,4218	RS1/8SQ0R0J
R 4251,4253	RS1/10SR0R0J
R 4252,4254	RS1/10SR102J

5		6		7		8	
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
Other Resistors			RS1/16SS###J	RESISTORS			
CAPACITORS				R	4402,4412	RS1/8SQ0R0J	A
C	4203	CKSSYB102K50		R	4406,4438	RS1/16SS1203D	
C	4208	DCH1201		R	4407,4425-4427,4441	RS1/16SS3302D	
C	4211	CKSSYB103K16		R	4421	RS1/16SS5602D	
C	4216	CKSSYB104K10		R	4429	RS1/16SS2702D	
Block Name: POWER_0 BLOCK(GC)				R	4440	RS1/16SS1002D	
SEMICONDUCTORS				R	4442,4444,4445	RS1/16SS3302D	
IC	4301	R5523N001B		Other Resistors		RS1/16SS###J	
IC	4302,4309	PQ200WNA1ZPH		CAPACITORS			
IC	4305,4310	NJM2846DL3-05		C	4401,4458	CKSRYB104K16	
IC	4306	BD8903FV		C	4403-4406,4409,4410	DCH1165	
IC	4308	NJM78M12DL1A		C	4407,4455,4457	CKSRYB682K50	B
Q	4303	2SA1576A		C	4411	CCG1232	
D	4301,4304,4306,4308	1SS352		C	4414	DCH1201	
D	4312	RB521S-40					
D	4316	1SS352		C	4426	CKSSYB104K10	
MISCELLANEOUS				C	4427,4465	CKSRYB105K10	
L	4301,4302 CHIP BEEDS FILTER	BTX1039		C	4435	CCSSCH470J50	
L	4304 CHIP BEEDS FILTER	BTX1042		C	4436,4439	CKSSYB152K50	
L	4305 INDUCTOR	BTH1111		C	4437	CCSSCH101J50	
L	4306 CHIP COIL	BTH1126					
RESISTORS				C	4438	CCSSCH330J50	
R	4304,4305,4308,4316	RS1/8SQ0R0J		C	4440	CKSSYB682K25	
R	4325	RS1/16SS3901F		C	4441	CKSSYB221K50	
R	4326	RS1/16SS1003D		C	4447,4448,4451,4452	BCG1059	C
R	4327	RS1/16SS2202F		C	4454	CKSRYB334K10	
R	4340	RS1/16SS2201F					
				C	4462-4464,4466-4468	BCG1059	
R	4343	RS1/16SS4701F		Block Name: POWER_2 BLOCK(GC)			
R	4344	RS1/16SS5101F		SEMICONDUCTORS			
R	4345	RS1/16SS2701F		IC	4601	LTC3407EMSE-2	
R	4346	RS1/16SS1501F		IC	4603,4604,4606	NJM2846DL3-18	
Other Resistors		RS1/16SS###J		Q	4601,4618	RSS090P03	
CAPACITORS				Q	4603,4619	UPA1917TE	
C	4301,4305,4308	CKSRYB105K10		Q	4604,4606,4608,4617	2SC4081	D
C	4303	CKSRYB104K25					
C	4304	CKSSYB682K25		Q	4605	DTC124EUA	
C	4306,4331	BCG1064		Q	4609,4610,4612	RN1902	
C	4309,4310	CEHVAW330M25		Q	4613	RSS100N03	
				Q	4614,4615	RTQ045N03	
C	4311	ACG1147		Q	4616	RTQ040P02	
C	4313,4327	DCH1201		D	4603,4608,4612	1SS352	
C	4315,4316,4342,4343	DCH1165		D	4609,4610	RB551V-30	
C	4347,4348,4352	CKSSYB104K10		MISCELLANEOUS			
Block Name: POWER_1 BLOCK(GC)				⚠	L 4601 CHIP BEEDS FILTER	BTX1039	
SEMICONDUCTORS					L 4602,4603 CHIP INDUCTOR (2.2 UH)	ATH1244	
IC	4402	BD8606FV			L 4604,4605 CHIP BEEDS FILTER	BTX1042	E
IC	4404	NJM2846DL3-33		RESISTORS			
Q	4404-4406	DTC124EUA		R	4601,4604,4606,4607	RS1/8SQ0R0J	
Q	4407,4408	2SC4081		R	4609,4610,4612-4617	RS1/8SQ0R0J	
Q	4409,4410	DTA124EUA		R	4649-4652,4655,4683	RS1/8SQ0R0J	
				R	4659	RS1/16SS1503D	
Q	4413	UPA1917TE		R	4663	RS1/16SS1003D	
Q	4416-4418	SP8M4					
D	4402	1SS352		R	4666	RS1/16SS2003D	
D	4405-4407	RB060M-30		R	4667	RS1/16SS6202D	
MISCELLANEOUS				R	4687,4688	RS1/8SQ0R0J	
L	4401-4406 CHIP BEEDS FILTER	BTX1039		Other Resistors		RS1/16SS###J	F
L	4409-4411 INDUCTOR (2.8 UH)	ATH1243		CAPACITORS			
L	4413-4416 CHIP BEEDS FILTER	BTX1039		C	4602,4604,4615,4621	CKSSYB104K10	

Mark No. Description

C 4606,4609,4654
C 4610,4612
C 4616,4617
C 4618

C 4620,4645,4648
C 4623,4626,4634,4649
C 4628,4638,4640,4641
C 4656

Part No.

CKSRYB105K10
BCG1059
CCSSCH470J50
CKSSYB103K16

CCSSCH101J50
CKSSYB104K10
DCH1201
DCH1201

Mark No. Description

C 4802
C 4803-4805,4807,4809
C 4806,4808,4810
C 4811-4817

C 4818-4820

Part No.

CKSSYB822K16
CKSSYB104K10
CKSSYB473K16
CKSSYB104K10

DCH1201

Block Name: HDMI_RX BLOCK(GC)**SEMICONDUCTORS**

IC 4901
Q 4902
Q 4903
Q 4904-4907,4914
Q 4908

Q 4910
Q 4913
D 4901

SII9135ACTU
DTC124EUA
2SC4081
UMD2N
RN1902

2SA1576A
HN1C01FU
RB520S-30

MISCELLANEOUS

L 4901-4905 CHIP SOLID INDUCTOR
L 4906,4907 CHIP BEEDS FILTER
F 4901,4902 CHIP FERRITE BEADS
X 4901 CRYSTAL (28.322 MHz)

QTL1013
BTX1042
ATF1211
ASS1226

RESISTORS

R 4944
R 4945-4954
R 4976-4979
Other Resistors

RAB4CQ100J
RAB4CQ680J
ACN1275
RS1/16SS###J

CAPACITORS

C 4901-4928,4932,4933
C 4929
C 4930,4931
C 4934,4937-4940
C 4936,4941,4946,4951

CKSSYB102K50
CKSSYB103K16
CCSSCH8R0D50
CKSSYB104K10
DCH1201

C 4942-4945,4947-4950
C 4952-4960

CKSSYB104K10
CKSSYB104K10

Block Name: HDMI_SW BLOCK(GC)**SEMICONDUCTORS**

IC 5001
IC 5002-5004
Q 5007-5009
Q 5011-5013
D 5004-5006

CXB1444R
BR24L02FV-W
UMD2N
RN1902
UDZS6R8(B)

MISCELLANEOUS

F 5001,5002 CHIP SOLID INDUCTOR
JA 5001-5003 HDMI CONNECTOR

DTL1041
AKP1318

RESISTORS

R 5006
R 5058
Other Resistors

RAB4CQ0R0J
RS1/16SS4701F
RS1/16SS###J

CAPACITORS

C 5001
C 5003-5007,5009-5013
C 5014
C 5015,5016,5018,5019

BCG1059
CKSSYB104K10
DCH1201
CKSSYB104K10

Block Name: AV_SW BLOCK(GC)**SEMICONDUCTORS**

IC 5101

R2S11006FT

Block Name: VDEC BLOCK(GC)**SEMICONDUCTORS**

IC 4701
IC 4702
Q 4701,4702

HY57V641620FTP-6
CM0048BF
2SA1576A

MISCELLANEOUS

L 4701 CHIP BEEDS FILTER
L 4702,4703 COIL
L 4706-4708 CHIP BEEDS FILTER
F 4701 INDUCTOR
X 4701 CRYSTAL (28.63636 MHz)

BTX1042
LCYC6R8K2125
BTX1042
CTF1557
ASS1214

RESISTORS

R 4702,4703
R 4710,4720
R 4711,4721
R 4712,4722
R 4713,4715,4723

RS1/8SQ0R0J
RS1/16SS1500F
RS1/16SS2201F
RS1/16SS1101F
RS1/16SS2701F

R 4714
R 4726,4737-4745
R 4746-4752
Other Resistors

RS1/16SS1001F
RAB4CQ470J
RAB4CQ101J
RS1/16SS###J

CAPACITORS

C 4701,4704-4706,4710
C 4702,4703
C 4707-4709,4712,4718
C 4711
C 4713,4717

CKSRYB105K10
CCSRCH300J50
CKSSYB103K16
CKSRYB105K10
CCSSCH330J50

C 4714,4719
C 4715,4716
C 4720
C 4721
C 4722-4736,4738-4774

CCSSCH680J50
CKSSYB102K50
CKSSYB103K16
CEHVAW101M6R3
CKSSYB104K10

C 4737,4793-4797
C 4787
C 4792

DCH1201
CKSSYB104K10
DCH1165

Block Name: ADCC BLOCK(GC)**SEMICONDUCTORS**

IC 4801

AD9985KSTZ-110

MISCELLANEOUS

L 4801,4802 CHIP BEEDS FILTER

BTX1042

RESISTORS

R 4804
R 4805-4808
R 4809-4814
R 4815
Other Resistors

RS1/16SS2701F
RS1/16SS470J
RAB4CQ560J
RAB4CQ103J
RS1/8SQ###J

CAPACITORS

C 4801

CKSSYB823K10

5			6			7			8		
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
MISCELLANEOUS				C	5860,5862,5871,5873		DCH1201				
L	5101	CHIP BEEDS FILTER	BTX1042	C	5863,5870,5872,5874		CKSSYB103K16				
RESISTORS				C	5875,5877,5886,5888		DCH1201				
R	5191		RS1/8SQ0R0J	C	5876,5878,5885,5887		CKSSYB103K16				
Other Resistors			RS1/16SS###J	C	5913		CKSSYB102K50				
CAPACITORS				C	5921,5922,5978		DCH1201				
C	5105,5131		DCH1201	C	5923,5924		CCSSCH150J50				
C	5110-5112,5138-5143		CKSRYB105K10	C	5971,5972,5980		CKSRYB105K10				
C	5132-5136		CKSSYB104K10	C	5977		CKSSYB104K10				
C	5137		DCH1165	C	5979		CEHVAW470M6R3				
Block Name: RGB_SW BLOCK(GC)				Block Name: A_TUNER BLOCK(GC)							
SEMICONDUCTORS				SEMICONDUCTORS							
IC	5501		R2S11001FT	Q	5304,5305		2SA1576A				
Q	5537		2SA1576A	Q	5306		HN1B04FU				
MISCELLANEOUS				Q	5307		HN1C01FU				
L	5501	CHIP BEEDS FILTER	BTX1042	MISCELLANEOUS							
RESISTORS				L	5301	CHIP BEEDS FILTER	BTX1042				
R	5513		RAB4CQ101J	L	5302,5303	CHIP COIL	BTH1121				
R	5554		RAB4CQ0R0J	F	5301-5304	FERRITE CORE	VTF1080				
Other Resistors			RS1/16SS###J	U	5301	FRONTEND	AXF1180				
CAPACITORS				RESISTORS							
C	5510-5515		CKSRYB105K10	R	5304		RS1/8SQ0R0J				
C	5516-5518		CCSSCH221J50	R	5306,5307		RS1/10SR331J				
C	5541-5546,5549-5556		CKSSYB103K16	R	5360,5361,5364-5366		RS1/10SR0R0J				
C	5547,5548		CCSSCH680J50	Other Resistors			RS1/16SS###J				
C	5557-5559,5561,5562		CKSSYB104K10	CAPACITORS							
C	5560,5591		DCH1201	C	5303		BCG1064				
Block Name: MSP BLOCK(GC)				C	5305,5307,5311,5323		DCH1201				
SEMICONDUCTORS				C	5309		CKSSYB104K10				
IC	5801		MSP5651M-QK-C3	C	5314,5315,5331,5332		CCSSCH100D50				
IC	5911		NJM4565V	C	5322		CKSRYB682K50				
IC	5971		BH3544F	Block Name: VBI_SLICER BLOCK(GE)							
Q	5801,5971		2SC4081	SEMICONDUCTORS							
Q	5866		DTC124EUA	IC	5701		TC90173FG				
D	5807,5808		UDZS8R2(B)	D	5701		HSM107S-E				
D	5866		1SS301	MISCELLANEOUS							
MISCELLANEOUS				L	5701,5702	CHIP BEEDS FILTER	BTX1042				
⚠ X	5801	CRYSTAL (20.25 MHz)	ASS1217	RESISTORS							
RESISTORS				R	5701		RS1/8SQ0R0J				
R	5822,5823		RAB4CQ471J	R	5714,5715		RAB4CQ151J				
R	5993-5995		RS1/8SQ0R0J	R	5716		RAB4CQ101J				
Other Resistors			RS1/16SS###J	Other Resistors			RS1/16SS###J				
CAPACITORS				CAPACITORS							
C	5801-5804,5807-5814		CKSRYB105K10	C	5701		CKSRYB474K10				
C	5815,5835,5836		CCG1205	C	5704		CCSSCH680J50				
C	5817,5841		CKSSYB473K16	C	5705-5712,5715-5720		CKSSYB104K10				
C	5818,5842,5844,5846		CKSSYB103K16	C	5714		DCH1201				
C	5824,5861,5864,5865		CCSSCH560J50	Block Name: USB BLOCK(GE)							
C	5843,5845,5847,5855		DCH1201	SEMICONDUCTORS							
C	5851,5853,5911,5912		DCH1165	IC	6401		M66596FP				
C	5852,5854,5856,5859		CKSSYB103K16	IC	6402		TC74LCX32FTS1				
C	5857		CCSSCH9R0D50	IC	6403,6404		TC74LCX245FTS1				
C	5858		CCSSCH100D50	MISCELLANEOUS							
				L	6401-6403	CHIP BEEDS FILTER	BTX1042				
				⚠ X	6401	CRYSTAL RESONATOR	BSS1131				

Mark No. Description**Part No.****Mark No. Description****Part No.****RESISTORS**

R 6401-6403
R 6408
R 6410
R 6411-6420
Other Resistors

RS1/8SQ0R0J
RS1/16SS5601F
RAB4CQ103J
RAB4CQ101J
RS1/16SS###J

CAPACITORS

C 6501,6504-6513,6518
C 6502,6514,6523
C 6503,6515,6516
C 6517
C 6519-6522,6524

CKSSYB104K10
DCH1201
CKSSYB102K50
CCG1232
CKSSYB102K50

CAPACITORS

C 6401
C 6402
C 6403-6410,6412,6414
C 6411,6413

CCSSCH150J50
CCSSCH220J50
CKSSYB104K10
DCH1201

C 6525-6528
C 6576
C 6577
C 6578,6580-6587
C 6589-6608,6610-6614

CKSSYB104K10
CCSSCH100D50
CCSSCH120J50
CKSRYB105K10
CKSRYB105K10

Block Name: AV_IO_0 BLOCK(GE)**Block Name: ARIA_1 BLOCK(GC)****MISCELLANEOUS**

JA 7401 9P PIN JACK
JA 7402 3P 4PIN MINIDIN (S)

AKB1319
AKP1280

MISCELLANEOUS

L 6601 CHIP BEEDS FILTER
F 6601-6616 FERRITE BEADS ARRAY

BTX1042
ATF1228

RESISTORS

All Resistors

RS1/10SR####F

RESISTORS

R 6603,6604,6607
R 6609-6611
R 6613-6627,6629
R 6628
R 6630

RS1/16SS2201F
RS1/16SS2201F
RAB4CQ101J
RAB4CQ330J
RAB4CQ220J

CAPACITORS

C 7401-7403
C 7404-7409
C 7410-7415
C 7416-7421

CKSSYB473K16
CKSSYB103K16
CKSSYB102K50
CKSRYB105K10

Other Resistors

RS1/16SS###J

CAPACITORS

C 6615
C 6616-6629
C 6632
C 6634

DCH1201
CKSSYB104K10
CCSSCH221J50
CKSRYB105K10

Block Name: AV_IO_1 BLOCK(GC)**Block Name: ARIA_DDR BLOCK(GC)****SEMICONDUCTORS**

Q 7502
Q 7505,7506

UMD2N
2SD2114K

SEMICONDUCTORS

NSP IC 6701
IC 6702-6704

AGC1091
EDD1232ABBH-5C-E

MISCELLANEOUS

F 7501-7503 INDUCTOR
JA 7501 9P PIN JACK
JA 7503 MINI JACK (4P)

CTF1557
AKB1330
AKN1073

RESISTORS

R 7501
R 7503
R 7515-7520
R 7527,7528
Other Resistors

RS1/10SR151J
RS1/10SR0R0J
RS1/10SR75R0F
RS1/10SR221J
RS1/16SS###J

MISCELLANEOUS

L 6701-6703 CHIP BEEDS FILTER

BTX1042

RESISTORS

R 6745-6780
Other Resistors

RAB4CQ470J
RS1/16SS###J

CAPACITORS

C 7501-7506
C 7507,7508,7534-7536
C 7513,7514
C 7515,7516
C 7517

CKSRYB105K10
CKSSYB471K50
CKSSYB104K10
CCG1205
ACH1454

CAPACITORS

C 6701-6707
C 6708,6710,6712,6714
C 6718
C 6722-6745

CKSSYB104K10
DCH1201
CKSSYB103K16
CKSRYB105K10

Block Name: ARIA_0 BLOCK(GC)**Block Name: IF_UCOM BLOCK(GC)****SEMICONDUCTORS**

IC 6501

PD6568A

SEMICONDUCTORS

IC 6801
IC 6802,6803
IC 6805
NSP IC 6811
IC 6951
Q 6812,6813,6819,6820

PST3628UR
TC74VHC126FTS1
TC74VHC08FTS1
AGC1086
MAX3232CPW
DTC124EUA

MISCELLANEOUS

L 6501-6503 CHIP BEEDS FILTER
L 6504,6505 CHIP BEEDS FILTER
L 6506-6509 INDUCTOR
X 6501 CRYSTAL (27 MHz)

BTX1042
BTX1039
LCYC1R0K1608
ASS1225

MISCELLANEOUS

X 6801 CERAMIC OSCILLATOR
X 6802 CRYSTAL OSCILLATOR

CSS1616
ASS1212

RESISTORS

R 6501-6504
R 6506
R 6514,6515
Other Resistors

RS1/8SQ0R0J
RAB4CQ220J
RAB4CQ103J
RS1/16SS###J

5			6			7			8		
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
RESISTORS				Block Name: EMMA2_MEM BLOCK(GC)							
R	6802,6806		RS1/8SQ0R0J	SEMICONDUCTORS							
R	6880,6885		RAB4CQ103J								
R	6883		RAB4CQ473J								
R	6884		RAB4CQ471J								
R	6961		RAB4CQ101J	IC	7201		EDD5116AFTA-5B-E				
Other Resistors			RS1/16SS###J	NSP	IC 7202		AGC1090				
					IC 7203		LP2995M				
CAPACITORS				MISCELLANEOUS							
C	6801		CKSSYB102K50	L	7201	CHIP BEEDS FILTER	BTX1042				
C	6802		CKSSYB472K16	RESISTORS							
C	6803,6804		CKSSYB471K50								
C	6805,6806		CCSSCH8R0D50								
C	6807,6809,6811		CKSSYB104K10								
C	6808,6812		DCH1201	R	7213		RS1/16SS1500F				
C	6810		CKSSYB103K16	R	7243-7246,7257-7259		RAB4CQ101J				
C	6814-6818,6820,6821		CKSSYB104K10	R	7247-7254,7256		RAB4CQ220J				
C	6951-6955		CKSSYB104K10	R	7255,7267		RAB4CQ103J				
				R	7260,7261,7268-7270		RAB4CQ560J				
				R	7262,7272-7275		RAB4CQ101J				
				Other Resistors			RS1/16SS###J				
Block Name: EMMA2 BLOCK(GC)				CAPACITORS							
SEMICONDUCTORS				C	7201		CKSRYB105K10				
				C	7202-7204		BCG1059				
				C	7205,7206,7225		DCH1201				
				C	7207-7221,7223		CKSSYB104K10				
IC	7002		TC74VHC08FTS1	C	7226		CEHVAW331M6R3				
IC	7003		UPD61123F1-100KA3A	Block Name: DP_TX BLOCK							
IC	7004		BR24L64F-W								
IC	7005		TC7WHU04FU								
IC	7006		TC74HC4066AFT								
Q	7001		2SJ461A	SEMICONDUCTORS							
Q	7002,7003,7006		DTC124EUA								
Q	7005,7008		SSM6N17FU								
Q	7007,7010		UMD2N								
MISCELLANEOUS				IC	7601		S25FL016A0LMF013				
L	7001-7003	CHIP BEEDS FILTER	BTX1042	IC	7602		GM60028H-CG				
F	7001	FERRITE CORE	VTF1091	IC	7603		GMT2404HROM				
X	7001	CRYSTAL (27 MHz)	ASS1225	MISCELLANEOUS							
							L	7601,7602	CHIP INDUCTOR	ATH1254	
							L	7603-7605	CHIP BEEDS FILTER	BTX1042	
							F	7601-7603	CHIP FERRITE BEADS	ATF1211	
				JA	7601	DP CONNECTOR	AKP1340				
				X	7601	CRYSTAL (27 MHz)	ASS1225				
RESISTORS				RESISTORS							
R	7026-7028		RS1/16SS2000D	R	7604		RS1/8SQ0R0J				
R	7029,7036		RS1/16SS6200D	R	7645		RS1/10SR2490F				
R	7033		RS1/16SS3300D	R	7649-7657,7662		RS1/16SS10R0F				
R	7035		RS1/16SS2200D	R	7658		RAB4CQ0R0J				
R	7045,7067,7070,7073		RAB4CQ103J	Other Resistors			RS1/16SS###J				
R	7060-7064,7066,7068		RAB4CQ101J								
R	7065,7075		RAB4CQ470J								
R	7069,7071,7083,7084		RAB4CQ101J								
R	7072		RAB4CQ221J	CAPACITORS							
R	7074		RAB4CQ103J								
R	7081		RAB4CQ222J								
R	7087-7091		RAB4CQ101J								
R	7109		RS1/8SQ0R0J	C	7601,7608-7614,7616		CKSSYB104K10				
Other Resistors			RS1/16SS###J	C	7602		CKSSYB471K50				
				C	7603		BCG1059				
				C	7604,7605		CCSSCH120J50				
				C	7606,7607,7617,7619		DCH1201				
				C	7618,7621,7624-7627		CKSSYB104K10				
				C	7620,7639		DCH1201				
				C	7629-7638,7640-7650		CKSSYB104K10				
CAPACITORS				Unit Name: FRONT_HDM_USB ASSY(GC MR)							
C	7001,7003-7011		CKSRYB105K10	MISCELLANEOUS							
C	7014		CKSSYB102K50								
C	7029,7030		CCSSCH120J50								
C	7031,7032		CCSSCH470J50								
C	7035-7040,7043		CKSSYB104K10	L	7301,7302	CHIP BEEDS FILTER	BTX1042				
C	7041,7044,7049		DCH1201	JA	7303	USB CONNECTOR	VKB1248				
C	7045-7048,7050,7051		CKSSYB104K10	CN	7304	CONNECTOR	AKM1291				

	1		2		3		4	
	Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
					C	9410,9411		CKSSYB104K10
A	Unit Name: LED ASSY(EU MR)				Unit Name: REAR IO ASSY(GC MR)			
	<u>SEMICONDUCTORS</u>				<u>SEMICONDUCTORS</u>			
	D	9401		SML-521MDW	D	8601		1SS301
	D	9402		TLRV1022				
	D	9403		SML E12BC7T(NP)				
	<u>MISCELLANEOUS</u>				<u>MISCELLANEOUS</u>			
	⚠	L	9408-9410 CHIP SOLID INDUCTOR	QTL1013	JA 8602	JACK		VKB1159
		CN	9402 L-PLUG (6P)	KM200NA6L	CN	8602 FFC CONNECTOR 9P RA		AKM1381
					CN	8603 9P D-SUB SOCKET		AKP1213
	<u>RESISTORS</u>				<u>RESISTORS</u>			
			All Resistors	RS1/10SR###J				RS1/16SS###J
B	<u>CAPACITORS</u>				<u>CAPACITORS</u>			
	C	9404,9406,9407		CKSSYB103K16	C	8604		CKSSYB471K50
	Unit Name: FRONT IO ASSY(EU MR)							
	<u>SEMICONDUCTORS</u>							
	IC	8501		BR24L01AFJ-W				
	IC	8502		TC74VHC08FTS1				
	Q	8501		DTC124EUA				
	Q	8502-8504		2SC4081				
	D	8507		1SS301				
C	D	8508		UDZS5R1(B)				
	<u>MISCELLANEOUS</u>							
	JA	8501	PIN JACK (3P)	AKB1303				
	JA	8503	MINI JACK	AKN1085				
	CN	8501	FFC CONNECTOR 26P	AKM1441				
	CN	8503	15P D-SUB SOCKET	AKP1214				
	<u>RESISTORS</u>							
	R	8501,8508		RST1/2SP120J				
	R	8506,8510-8512		RS1/10SR75R0F				
	R	8514		RAB4CQ473J				
D	R	8515,8516		RAB4CQ101J				
	R	8517		RAB4CQ222J				
			Other Resistors	RS1/16SS###J				
	<u>CAPACITORS</u>							
	C	8501,8510-8512		CKSRYB105K10				
	C	8502,8509		CKSSYB104K10				
	C	8503,8504,8513,8514		CKSSYB102K50				
	C	8507,8508		ACH1454				
	C	8515		CKSRYB104K16				
E	Unit Name: KEY ASSY(EU MR)							
	<u>SEMICONDUCTORS</u>							
	Q	9401		HN1B04FU				
	TH	9401		TH05-3H103F				
	<u>MISCELLANEOUS</u>							
	⚠	L	9401-9406 CHIP SOLID INDUCTOR	QTL1013				
	S	9401-9406	PUSH SWITCH	CSG1155				
	CN	9401	L-PLUG (7P)	KM200NA7L				
	<u>RESISTORS</u>							
	R	9407		RS1/10SR4701F				
F			Other Resistors	RS1/16SS###J				
	<u>CAPACITORS</u>							
	C	9409		CKSSYB103K16				
166				KRP-M01				

Pioneer

Service Manual



KRP-M01

ORDER NO.
ARP3509

MEDIA RECEIVER

KRP-M01

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
KRP-M01	WYSIXK5	AC 220 V to 240 V	
KRP-M01	WYSXJ5	AC 220 V to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
KRP-M01	ARP3508	EXPLODED VIEWS, BLOCK DIAGLAM, ADJUSTMENT, etc



For details, refer to "Important Check Points for good servicing".

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A

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

B

C

D

E

F

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



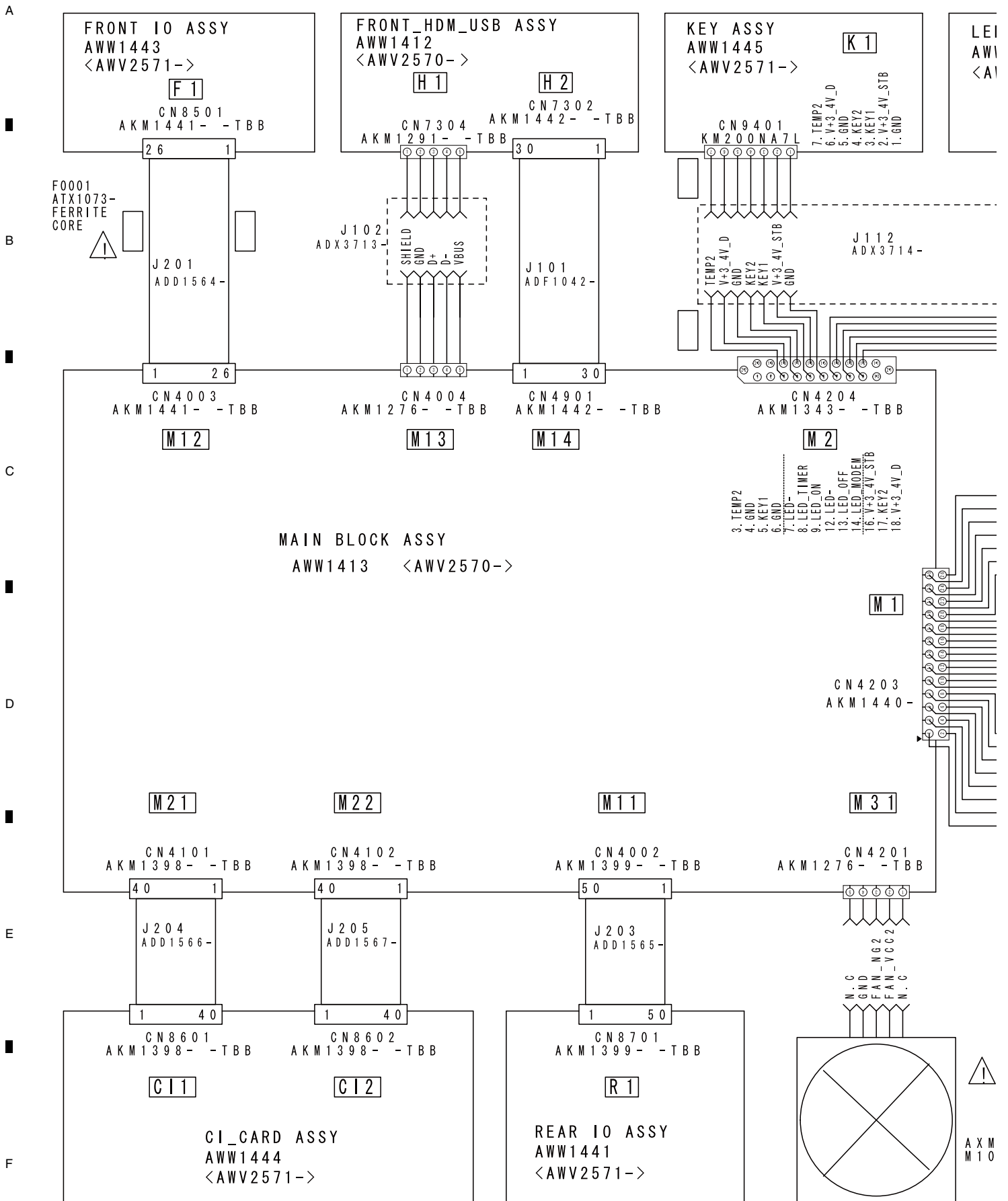
To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

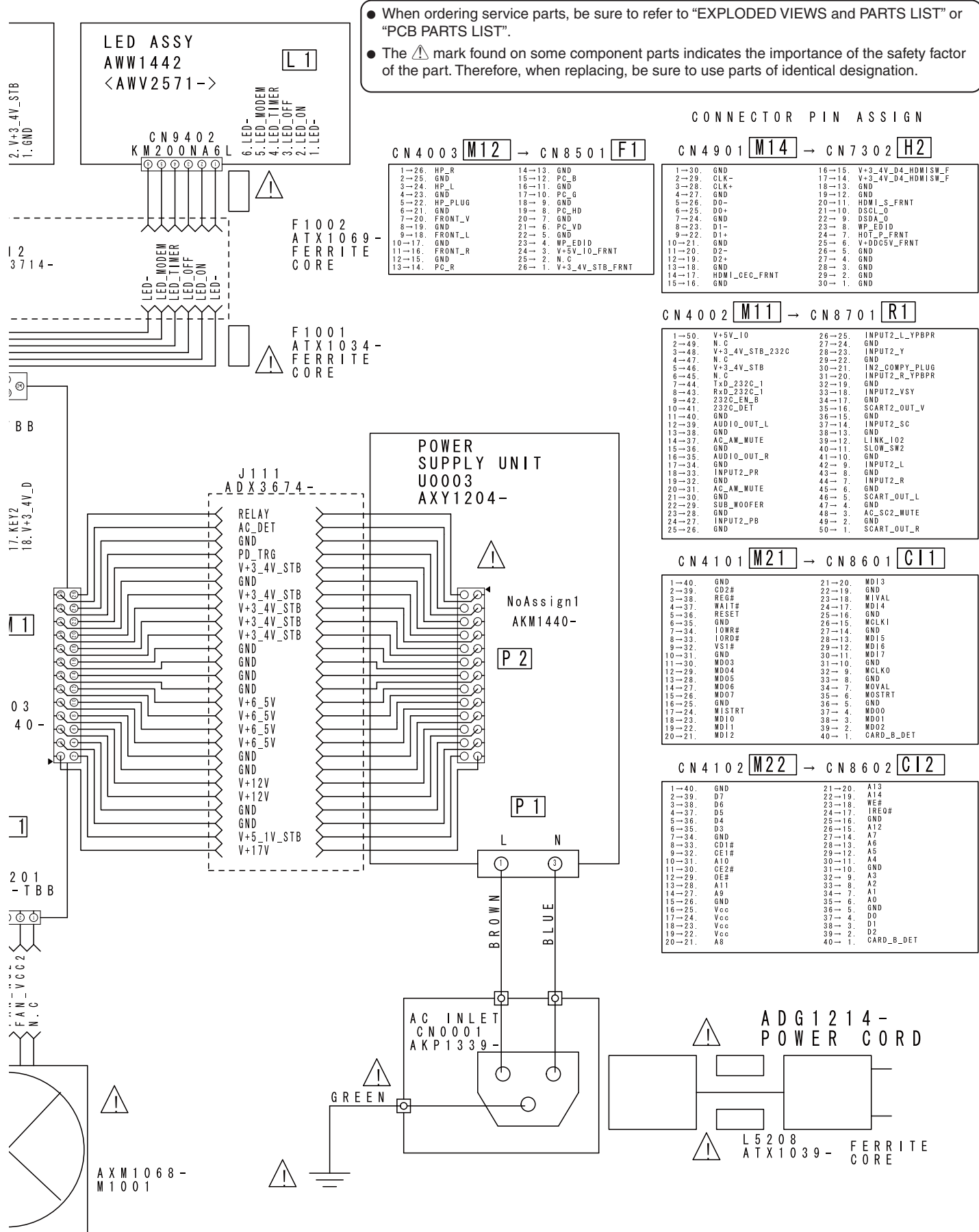
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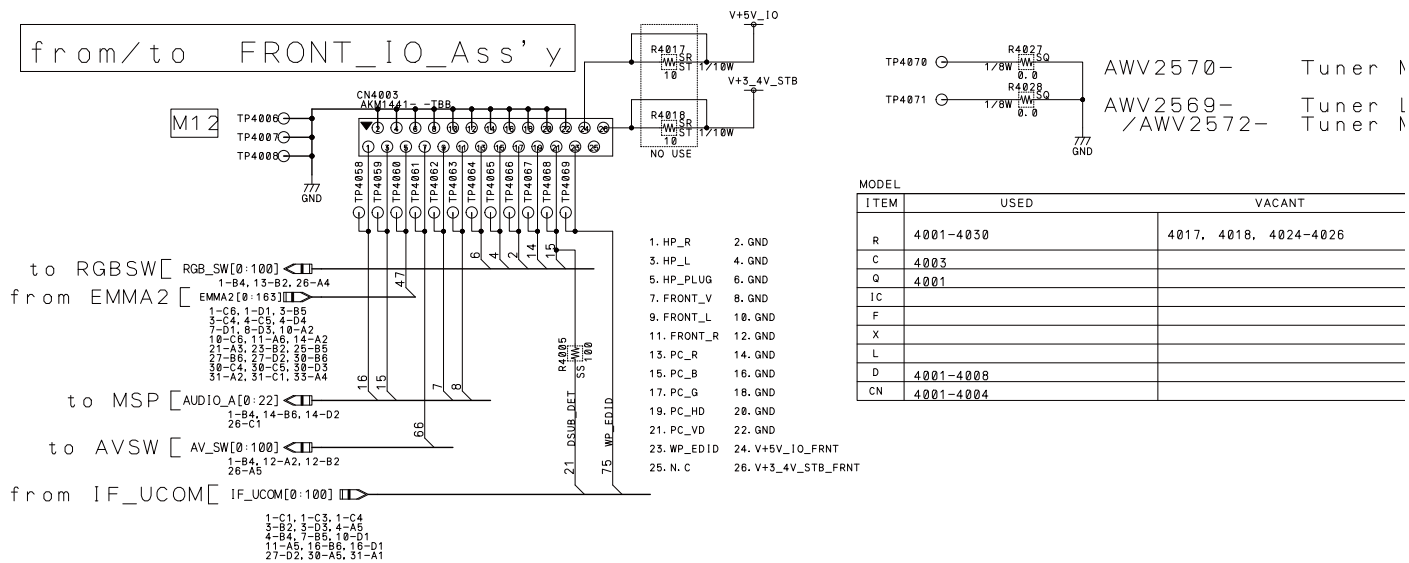
10.1 OVERALL CONNECTION DIAGRAM



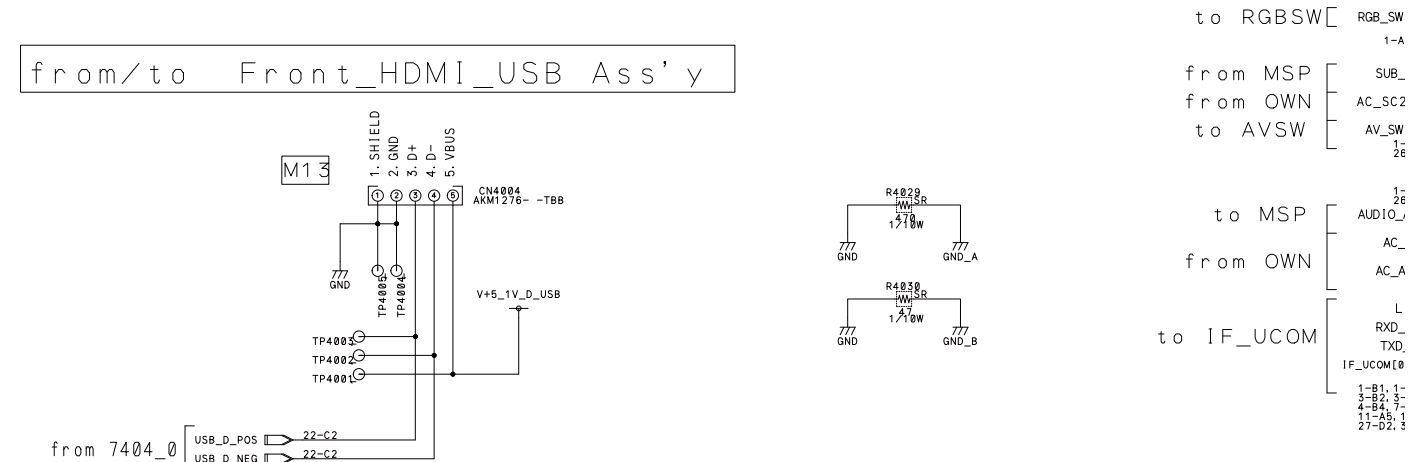


10.2 MAIN BLOCK ASSY (1/33) [BOARD_IF_0 BLOCK]

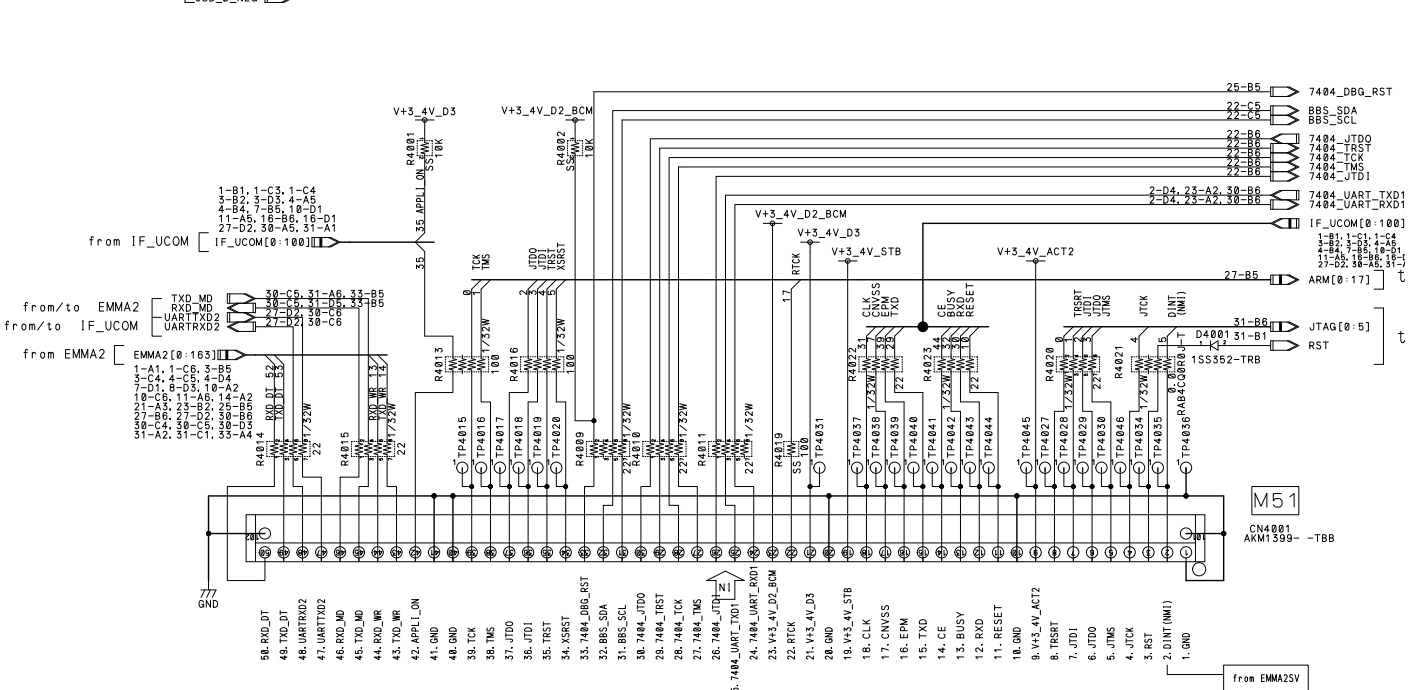
A



B



C



D

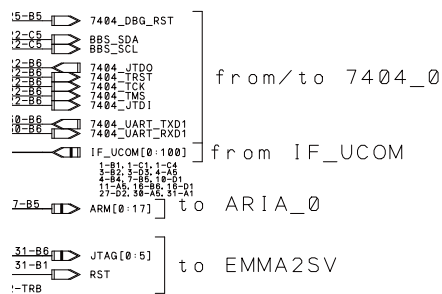
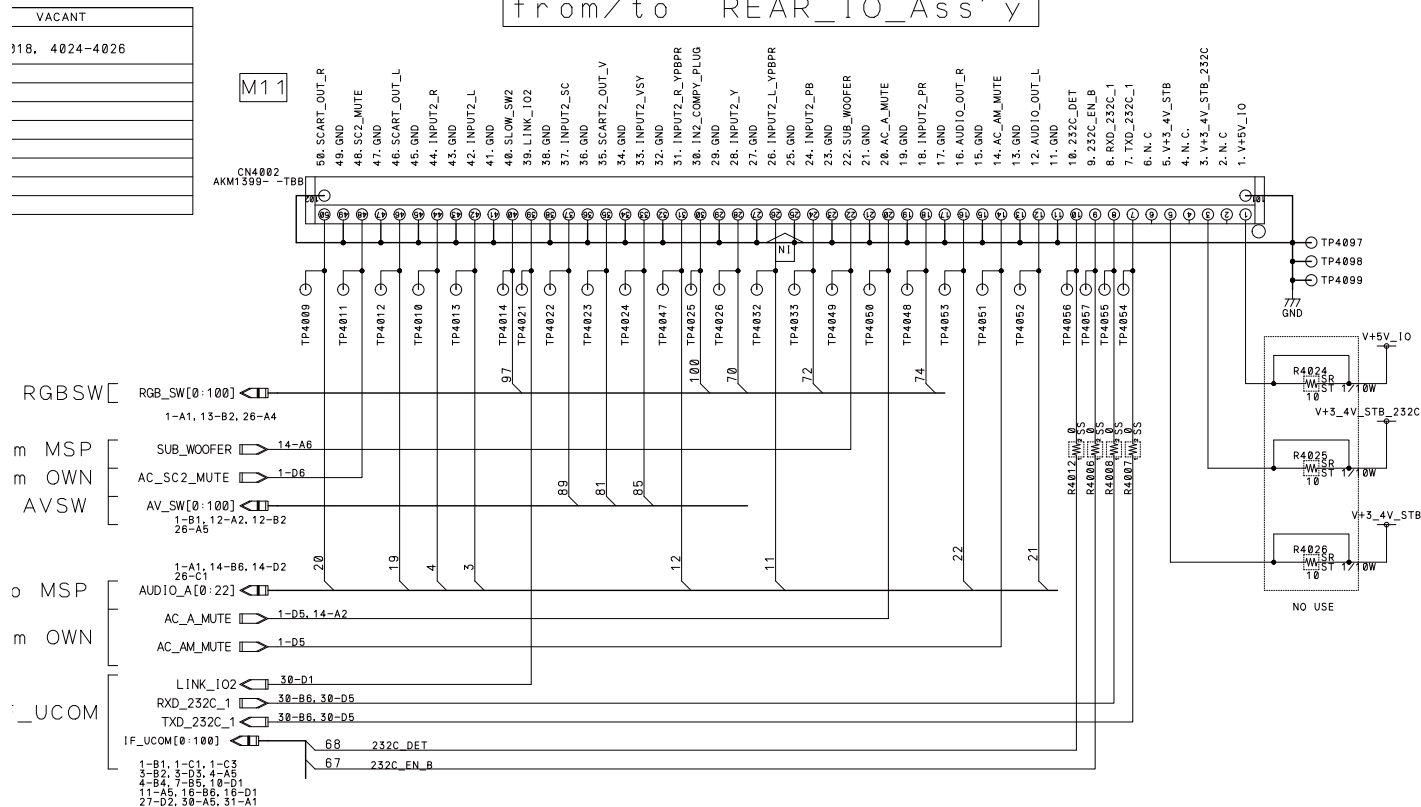
E

F

from/to EMMA/ARIA JIGU Board

Tuner Mounted in MPT
 Tuner Less Ass'y
 2- Tuner Mounted in PTK

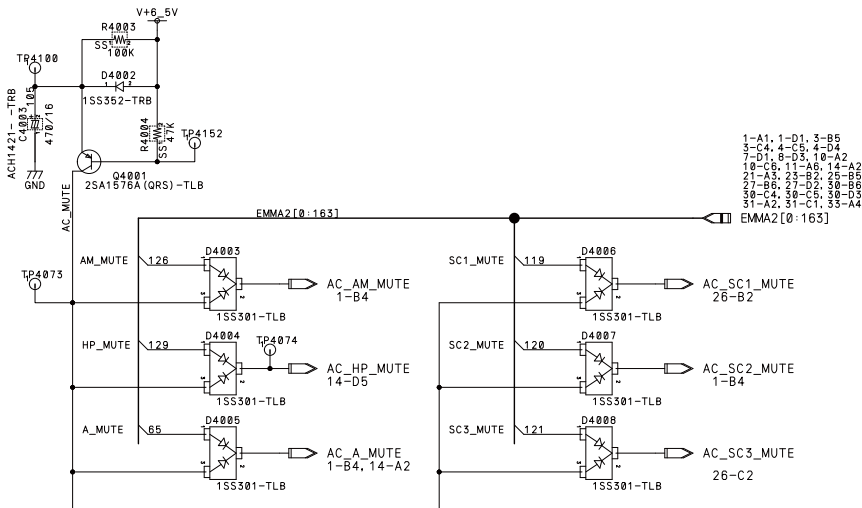
from/to REAR_IO_Ass'y



M51

CN4001 AKM1399 -TBB

from EMMA2SV

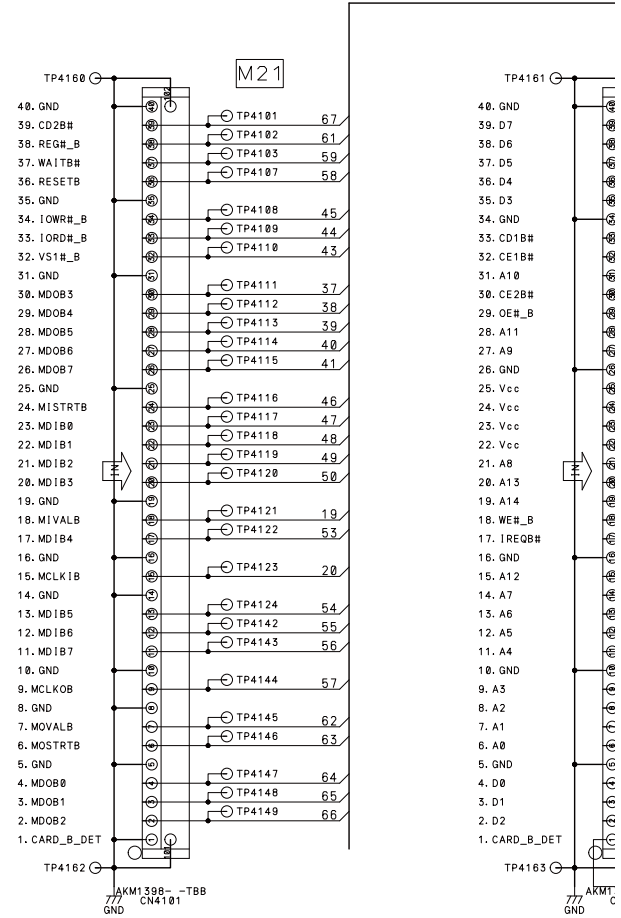


MAIN ASSY (MR_EU) (01/34)
 BOARD_IF_0 BLOCK

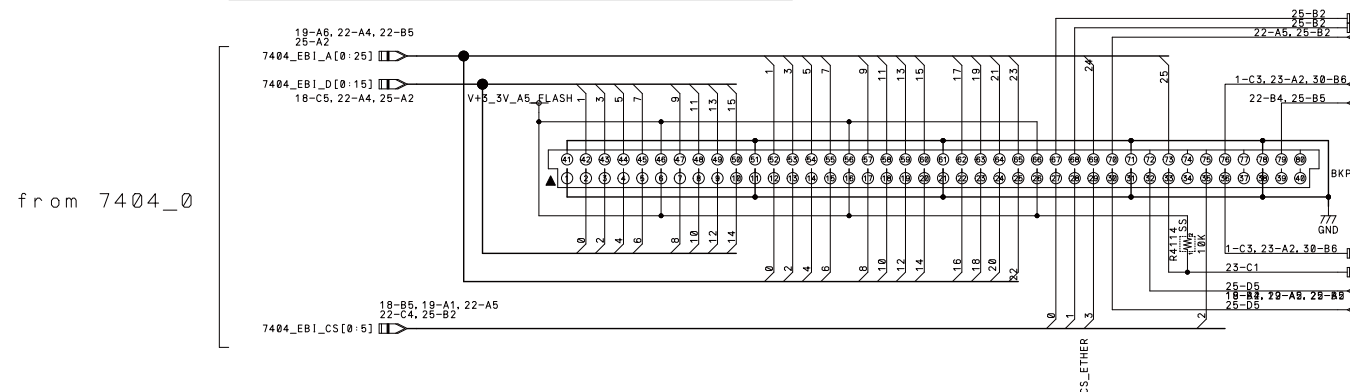
AWV2570 : AWV1413
 AWV2568 : AWV1411
 AWV2572 : AWV1411

10.3 MAIN BLOCK ASSY (2/33) [BOARD_IF_1 BLOCK]

from/to CI_CARD_Ass'y



from/to 7404 FLASH JIGU



A

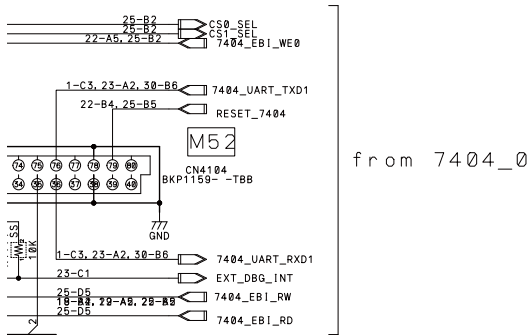
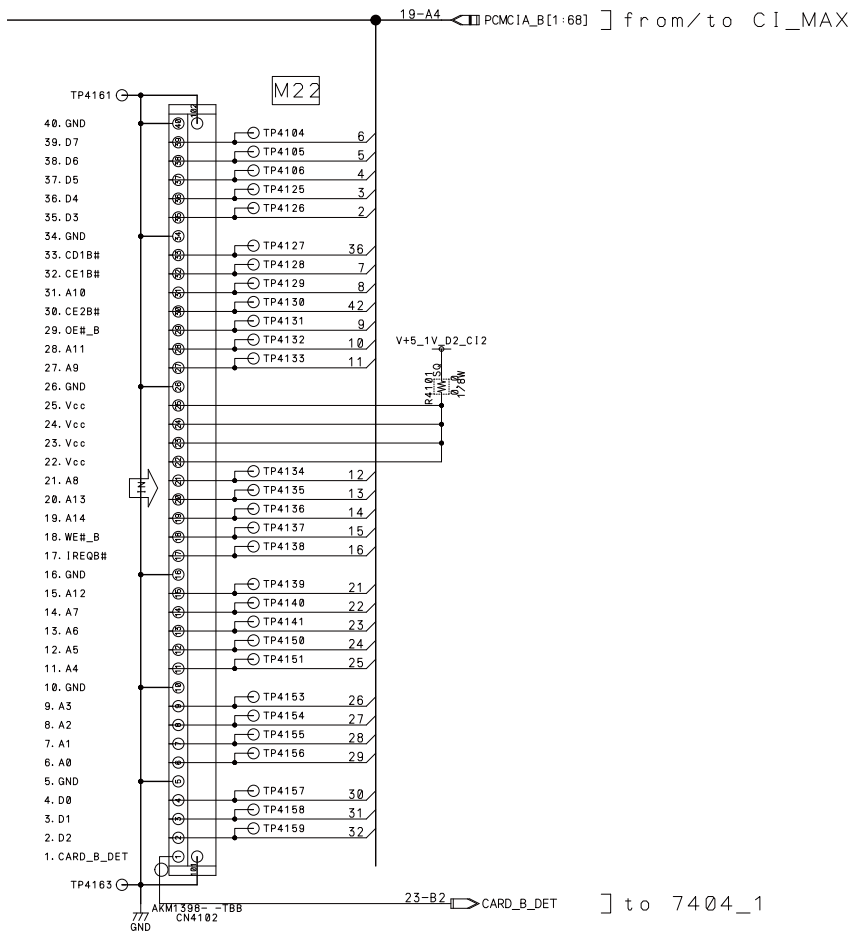
B

C

D

E

F



MODEL		
ITEM	USED	VACANT
R	4101, 4114	
C		
Q		
IC		
F		
X		
L		
D		
CN	4101-4102, 4104	

MAIN ASSY (MR_EU) (02/34)
BOARD_IF_1 BLOCK
AWV2570 : AWW1413
AWV2569 : AWW1413
AWV2572 : AWW1411

10.4 MAIN BLOCK ASSY (3/33) [BOARD_IF_2 BLOCK]

A

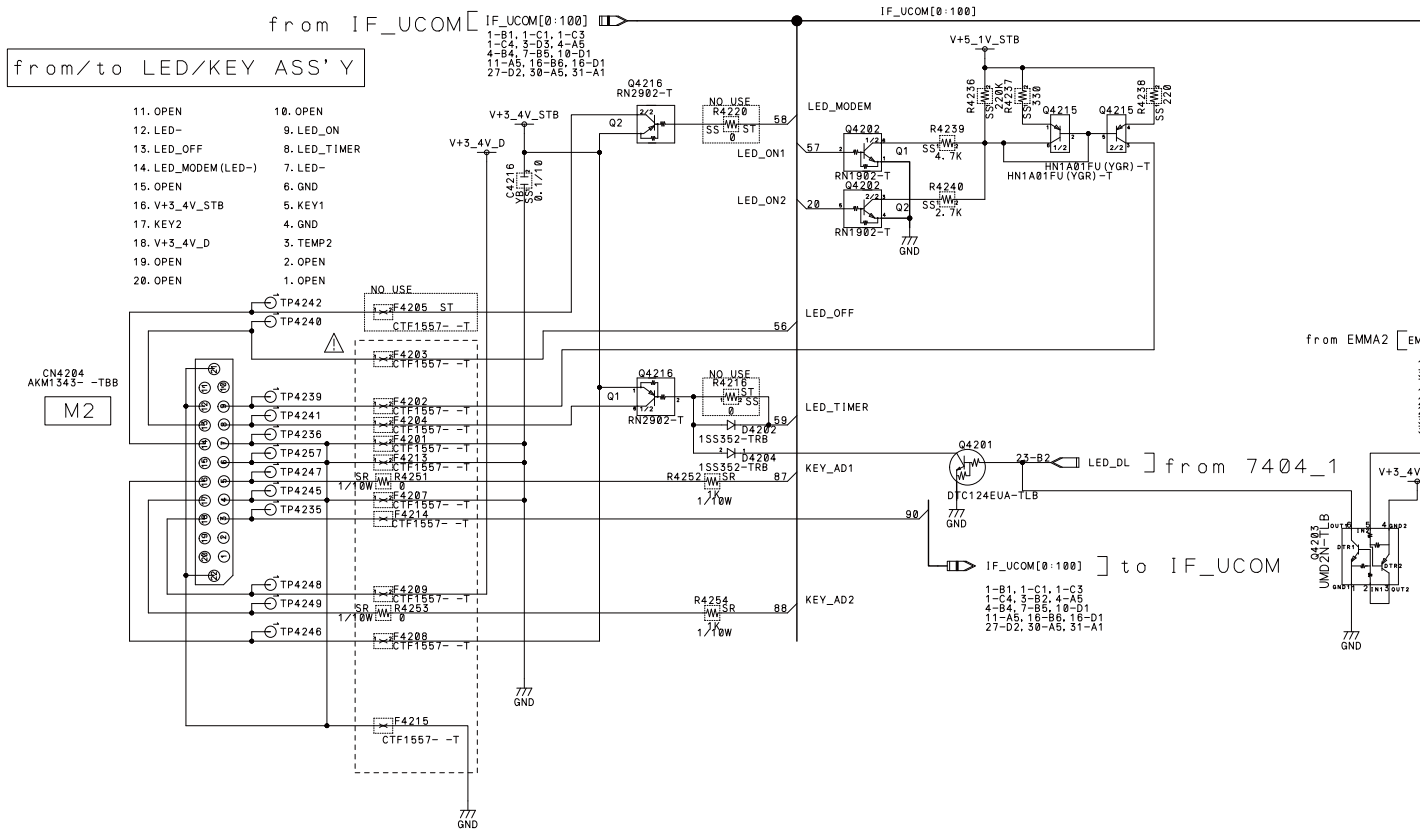
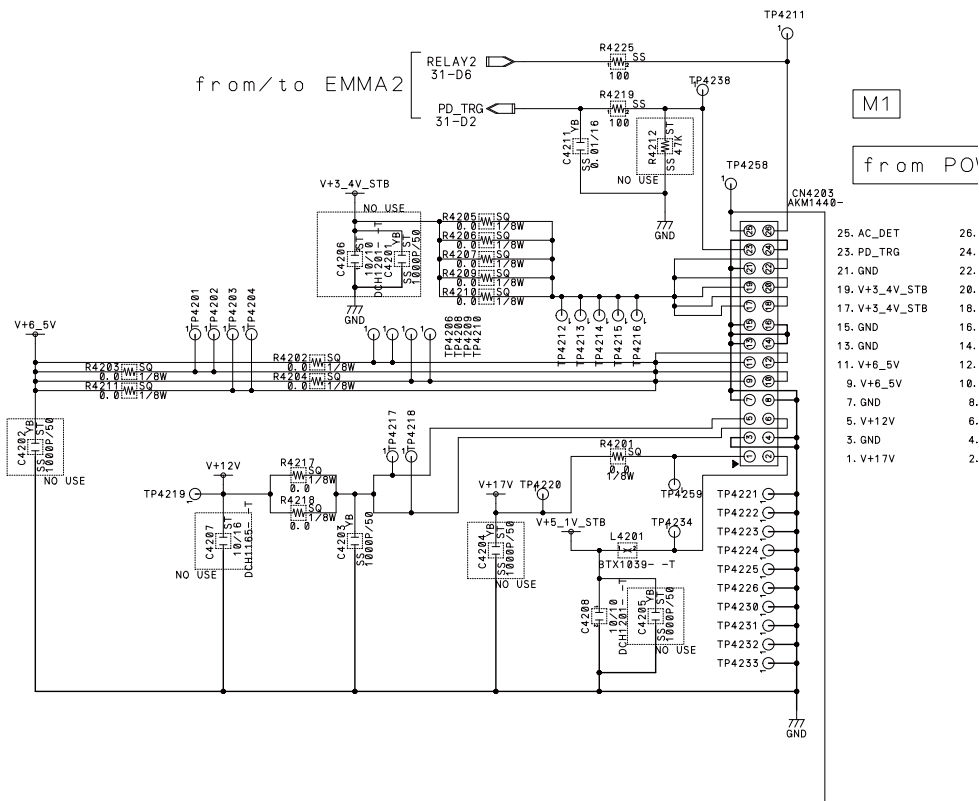
B

C

D

E

F



10.5 MAIN BLOCK ASSY (4/33) [POWER_0 BLOCK]

A

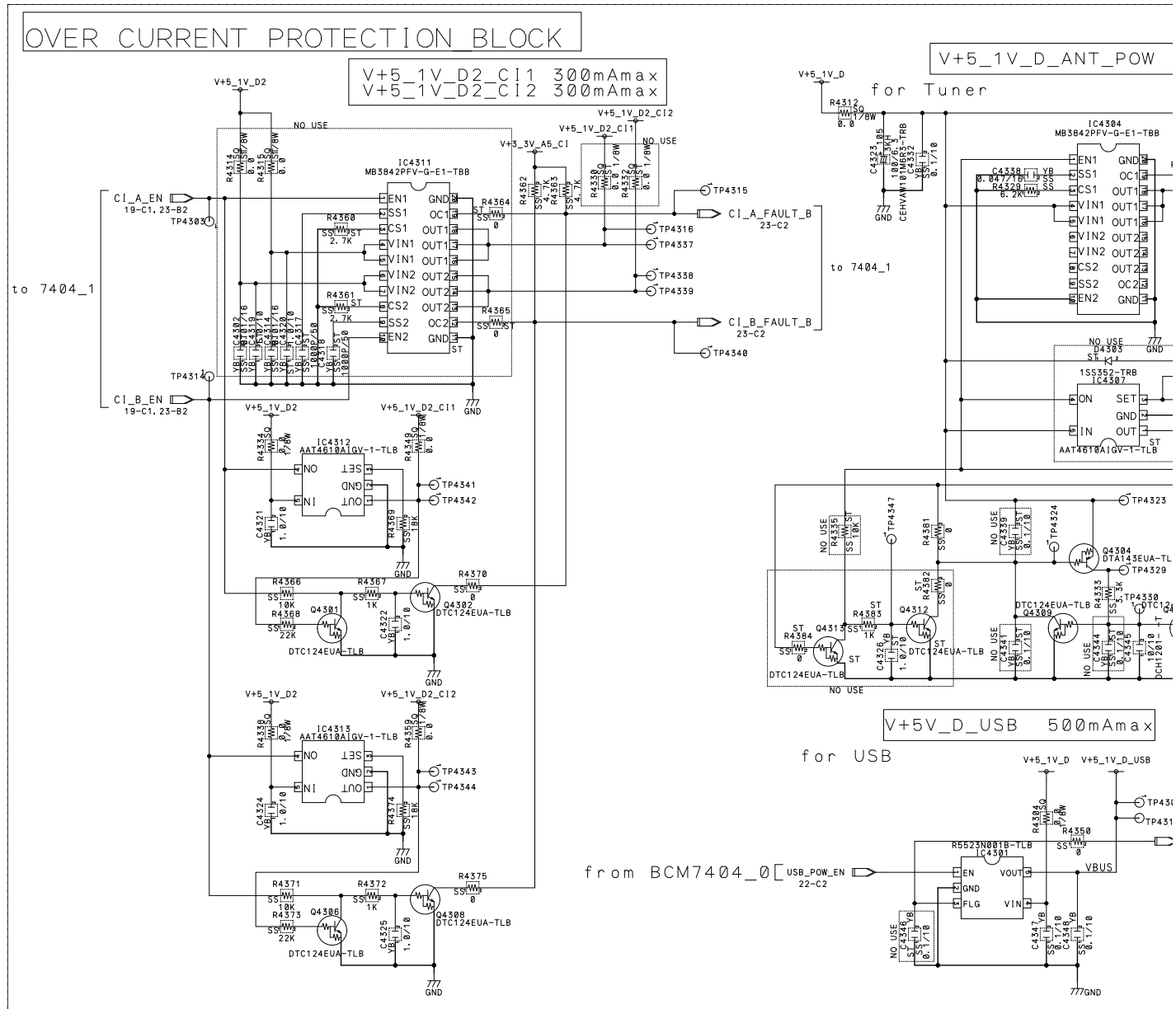
B

C

D

E

F



MODEL	ITEM	USED
R	4301-4317, 4319-	
C	4301-4327, 4331, 4332, 4333, 4334, 4335, 4336, 4337, 4338, 4339, 4340, 4341, 4342, 4343, 4344, 4345, 4346, 4347, 4348, 4349, 4350, 4351, 4352, 4353, 4354, 4355, 4356, 4357, 4358, 4359, 4360, 4361, 4362, 4363, 4364, 4365, 4366, 4367, 4368, 4369, 4370, 4371, 4372, 4373, 4374, 4375, 4376, 4377, 4378, 4379, 4380, 4381, 4382, 4383, 4384, 4385, 4386, 4387, 4388, 4389, 4390, 4391, 4392, 4393, 4394, 4395, 4396, 4397, 4398, 4399, 4400	
Q	4301-4313	
IC	4301-4313	
F		
X		
L	4302, 4303, 4305	
D	4301-4306, 4308, 4313, 4316	
CN		



JOEL	USED	VACANT
TEM		
R	4301-4317, 4319-4304	4302, 4303, 4306, 4311, 4314, 4334-4337, 4360, 4363, 4374, 4375, 4376, 4379, 4380, 4382
C	4301-4327, 4331, 4332, 4334-4335, 4338, 4339, 4347-4348, 4350-4352	4302, 4307, 4312, 4314, 4317, 4320, 4328, 4333, 4339, 4344, 4347, 4348, 4350, 4358
Q	4301-4313	4307, 4312, 4313
C	4301-4313	4303, 4307, 4311
F		
X		
L	4302, 4303, 4305, 4306	4303
D	4301-4306, 4308, 4312,	4302, 4303, 4305, 4315
N	4313, 4316	

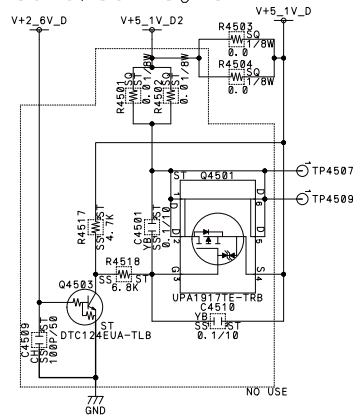
4

4



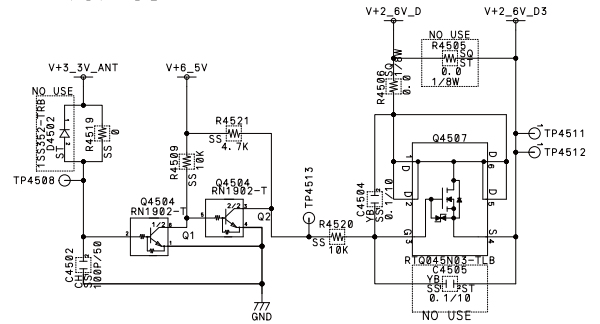
V+5_1V_D2 +1.7, -2.9% 850mAmax

for CS_FE, CSDEM,
CI_card, CI logic



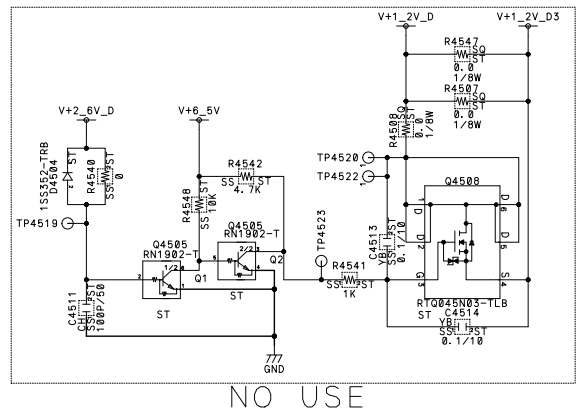
V+2_6V_D3 110mAmax

for CS



V+1_2V_D3 +1.7%-4.1% 840mAmax

for AAC



NO USE

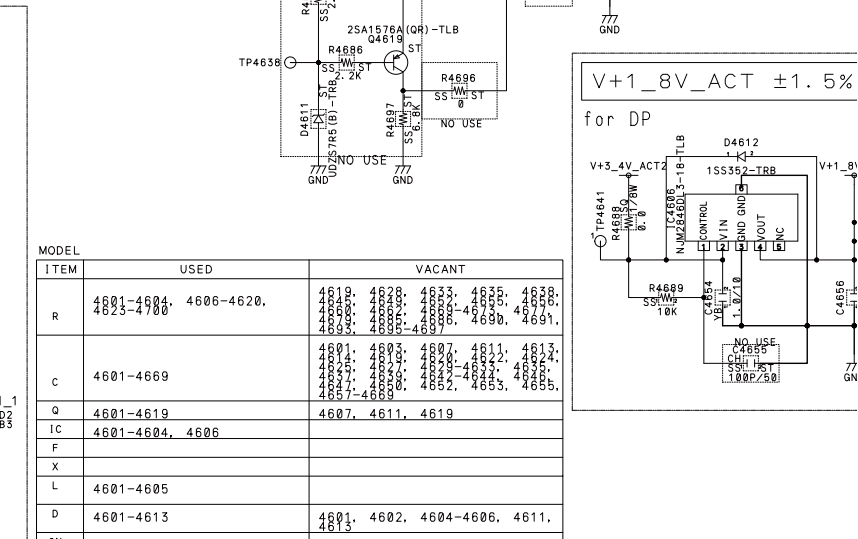
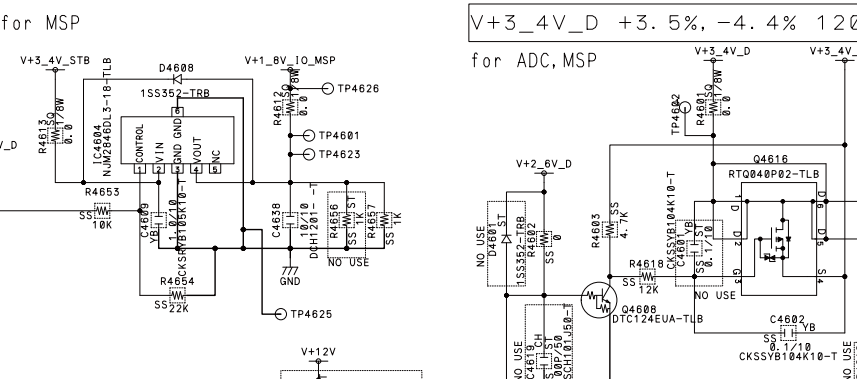
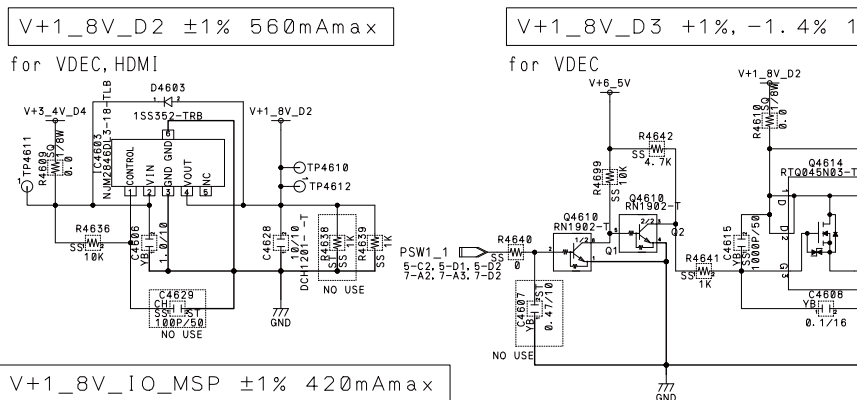
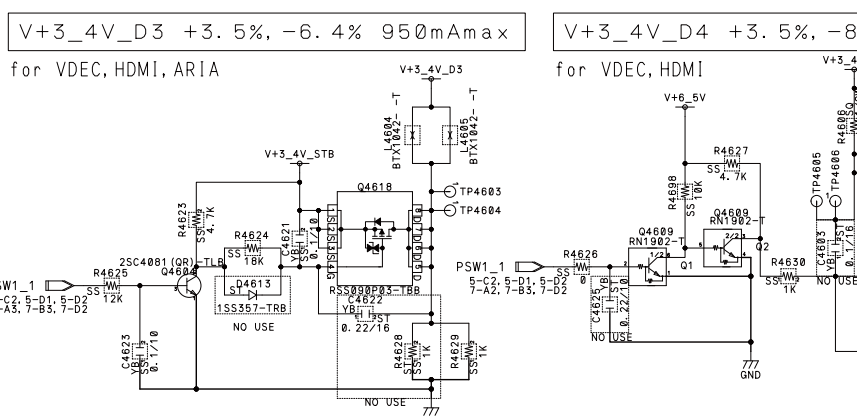
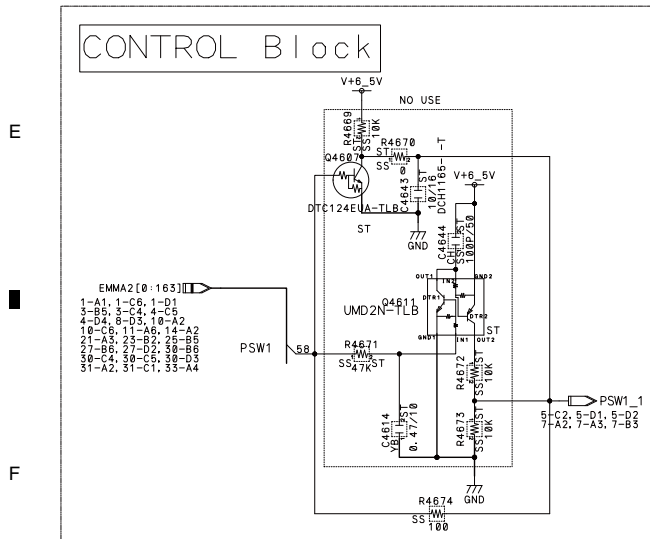
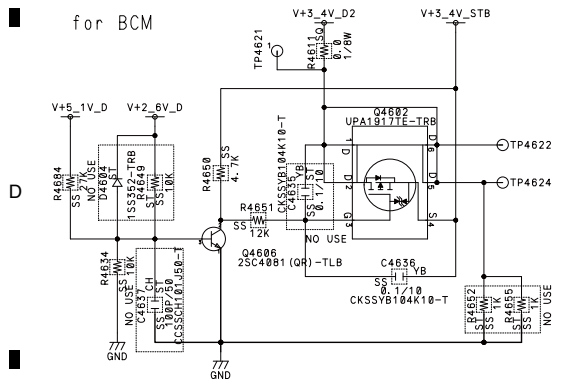
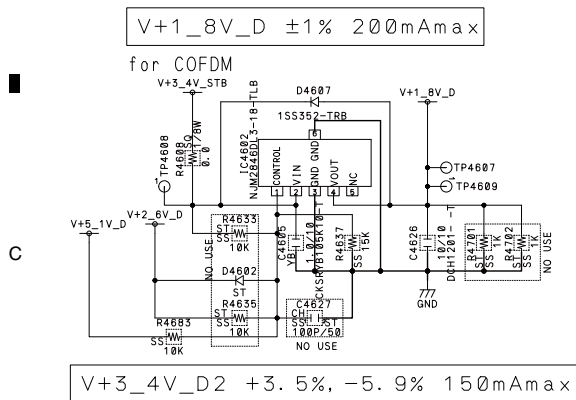
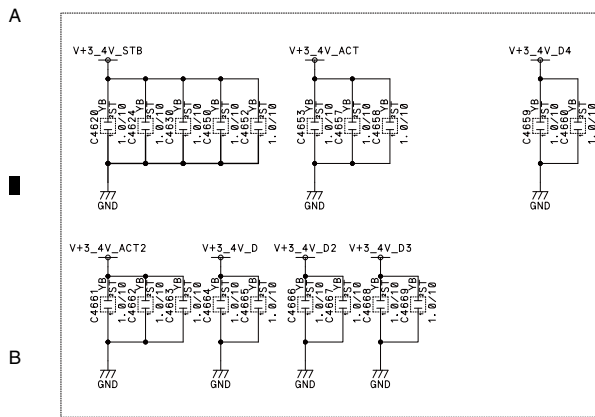
MODEL

ITEM	USED	VACANT
R	4501-4549	4501, 4502, 4503, 4504, 4505, 4506, 4507, 4508, 4509, 4510, 4511, 4512, 4513, 4514, 4515, 4516, 4517, 4518, 4519, 4520, 4521, 4522, 4523, 4524, 4525, 4526, 4527, 4528, 4529, 4530, 4531, 4532, 4533, 4534, 4535, 4536, 4537, 4538, 4539, 4540, 4541, 4542, 4543, 4544, 4545, 4546, 4547, 4548, 4549
C	4501-4510, 4527-4530, 4535-4555	4501, 4502, 4503, 4504, 4505, 4506, 4507, 4508, 4509, 4510, 4511, 4512, 4513, 4514, 4515, 4516, 4517, 4518, 4519, 4520, 4521, 4522, 4523, 4524, 4525, 4526, 4527, 4528, 4529, 4530, 4531, 4532, 4533, 4534, 4535, 4536, 4537, 4538, 4539, 4540, 4541, 4542, 4543, 4544, 4545, 4546, 4547, 4548, 4549, 4550, 4551, 4552, 4553, 4554, 4555
Q	4501-4505, 4507-4510	4501, 4503, 4505, 4508
IC	4501, 4503	
F		
X		
L	4501-4507	4504
D	4501-4505, 4508-4513	4502-4505, 4512
CN		

MAIN ASSY (MR_EU) (06/34)
POWER_2 BLOCK

AWV2570- : AWW1413
AWV2568- : AWW1411
AWV2572- : AWW1411

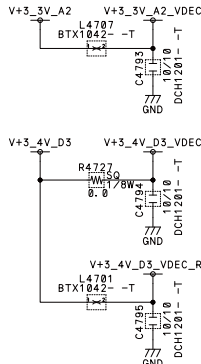
10.8 MAIN BLOCK ASSY (7/33) [POWER_3 BLOCK]



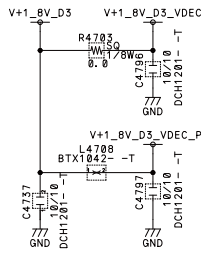
MODEL	ITEM	USED	VACANT
R	4601-4604, 4606-4620,	4601, 4602, 4604, 4606, 4607, 4611, 4619	4603, 4605, 4608, 4610, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619, 4620, 4621, 4622, 4623, 4624, 4625, 4626, 4627, 4628, 4629, 4630, 4631, 4632, 4633, 4634, 4635, 4636, 4637, 4638, 4639, 4640, 4641, 4642, 4643, 4644, 4645, 4646, 4647, 4648, 4649, 4650, 4651, 4652, 4653, 4654, 4655, 4656, 4657, 4658, 4659, 4660, 4661, 4662, 4663, 4664, 4665, 4666, 4667, 4668, 4669, 4670, 4671, 4672, 4673, 4674, 4675, 4676, 4677, 4678, 4679, 4680, 4681, 4682, 4683, 4684, 4685, 4686, 4687, 4688, 4689, 4690, 4691, 4692, 4693, 4694, 4695, 4696, 4697, 4698, 4699, 4700
	4623-4700	4601, 4602, 4604, 4606, 4607, 4611, 4619	4603, 4605, 4608, 4610, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619, 4620, 4621, 4622, 4623, 4624, 4625, 4626, 4627, 4628, 4629, 4630, 4631, 4632, 4633, 4634, 4635, 4636, 4637, 4638, 4639, 4640, 4641, 4642, 4643, 4644, 4645, 4646, 4647, 4648, 4649, 4650, 4651, 4652, 4653, 4654, 4655, 4656, 4657, 4658, 4659, 4660, 4661, 4662, 4663, 4664, 4665, 4666, 4667, 4668, 4669, 4670, 4671, 4672, 4673, 4674, 4675, 4676, 4677, 4678, 4679, 4680, 4681, 4682, 4683, 4684, 4685, 4686, 4687, 4688, 4689, 4690, 4691, 4692, 4693, 4694, 4695, 4696, 4697, 4698, 4699, 4700
C	4601-4669	4601, 4602, 4604, 4606, 4607, 4611, 4619	4603, 4605, 4608, 4610, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619, 4620, 4621, 4622, 4623, 4624, 4625, 4626, 4627, 4628, 4629, 4630, 4631, 4632, 4633, 4634, 4635, 4636, 4637, 4638, 4639, 4640, 4641, 4642, 4643, 4644, 4645, 4646, 4647, 4648, 4649, 4650, 4651, 4652, 4653, 4654, 4655, 4656, 4657, 4658, 4659, 4660, 4661, 4662, 4663, 4664, 4665, 4666, 4667, 4668, 4669
Q	4601-4619	4601, 4602, 4604, 4606, 4607, 4611, 4619	4603, 4605, 4608, 4610, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619
IC	4601-4604, 4606	4601, 4602, 4604, 4606	4603, 4605, 4607, 4608, 4609, 4610, 4611, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619
F			
X			
L	4601-4605	4601, 4602, 4604, 4605	4603, 4606, 4607, 4608, 4609, 4610, 4611, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619
D	4601-4613	4601, 4602, 4604-4606, 4611,	4603, 4605, 4607, 4608, 4609, 4610, 4612, 4613, 4614, 4615, 4616, 4617, 4618, 4619
CN			

10.9 MAIN BLOCK ASSY (8/33) [VDEC BLOCK]

A



B



C

from AV_SW

from/to RGB_SW

D

E

F

from AV_SW

SUB_C

SUB_Y

12-B5

12-B5

R4762

R4772

SS1W100

SS1W100

TP4704

TP4705

from EMMA2

SDA_MB

SCL_MB

10-A4, 31-C6

10-A4, 31-C6

TP4701

TP4702

SS1W100

SS1W100

10-A4, 31-C6

10-A4, 31-C6

TP4701

TP4702

SS1W100

SS1W100

10-A4, 31-C6

10-A4, 31-C6

TP4701

TP4702

SS1W100

SS1W100

10-A4, 31-C6

10-A4, 31-C6

TP4701

TP4702

SS1W100

SS1W100

10-A4, 31-C6

10-A4, 31-C6

TP4701

TP4702

SS1W100

SS1W100

10-A4, 31-C6

10-A4, 31-C6

TP4701

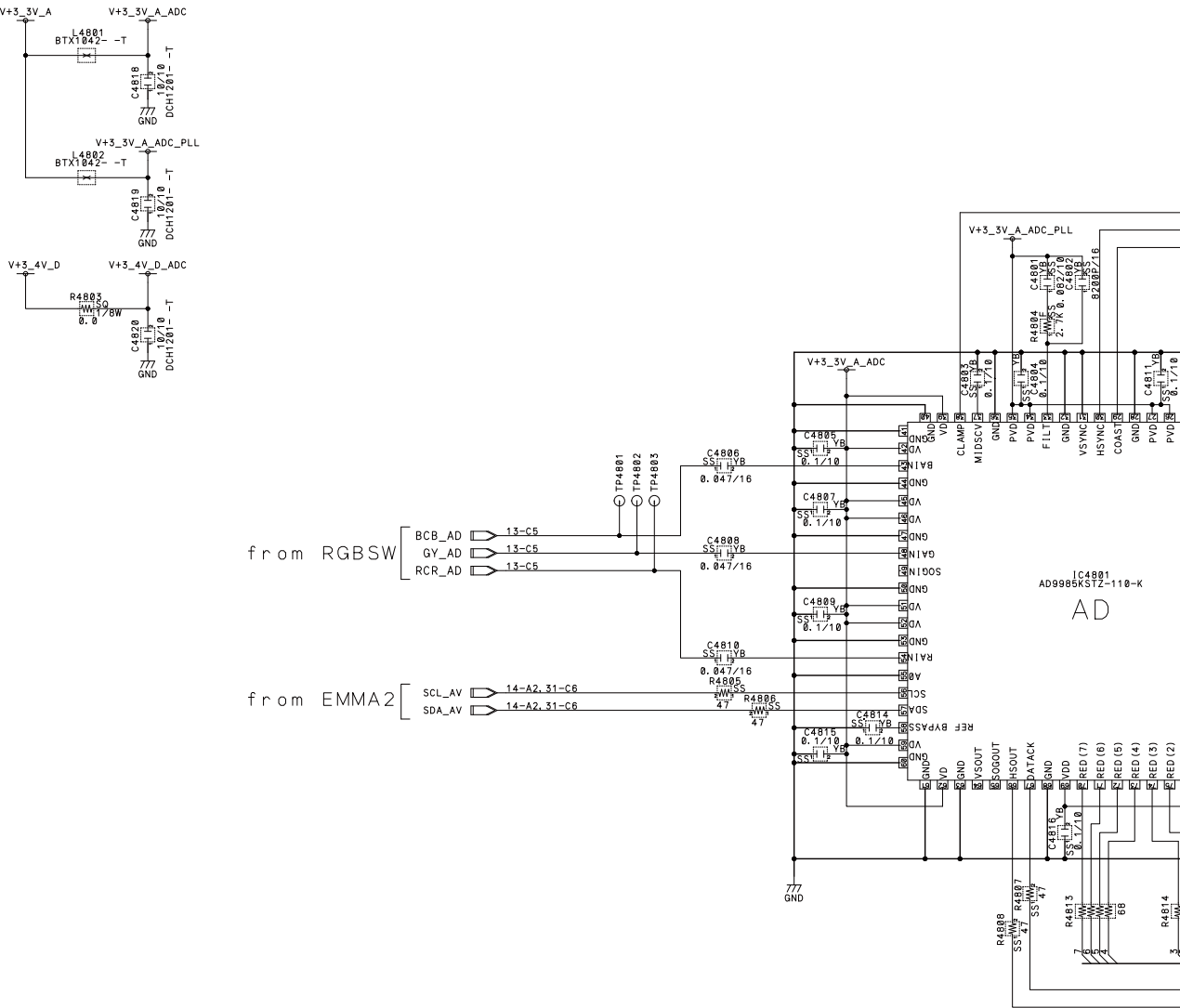
TP4702

SS1W100

SS1W100

KRP-M01

10.10 MAIN BLOCK ASSY (9/33) [ADC BLOCK]



A

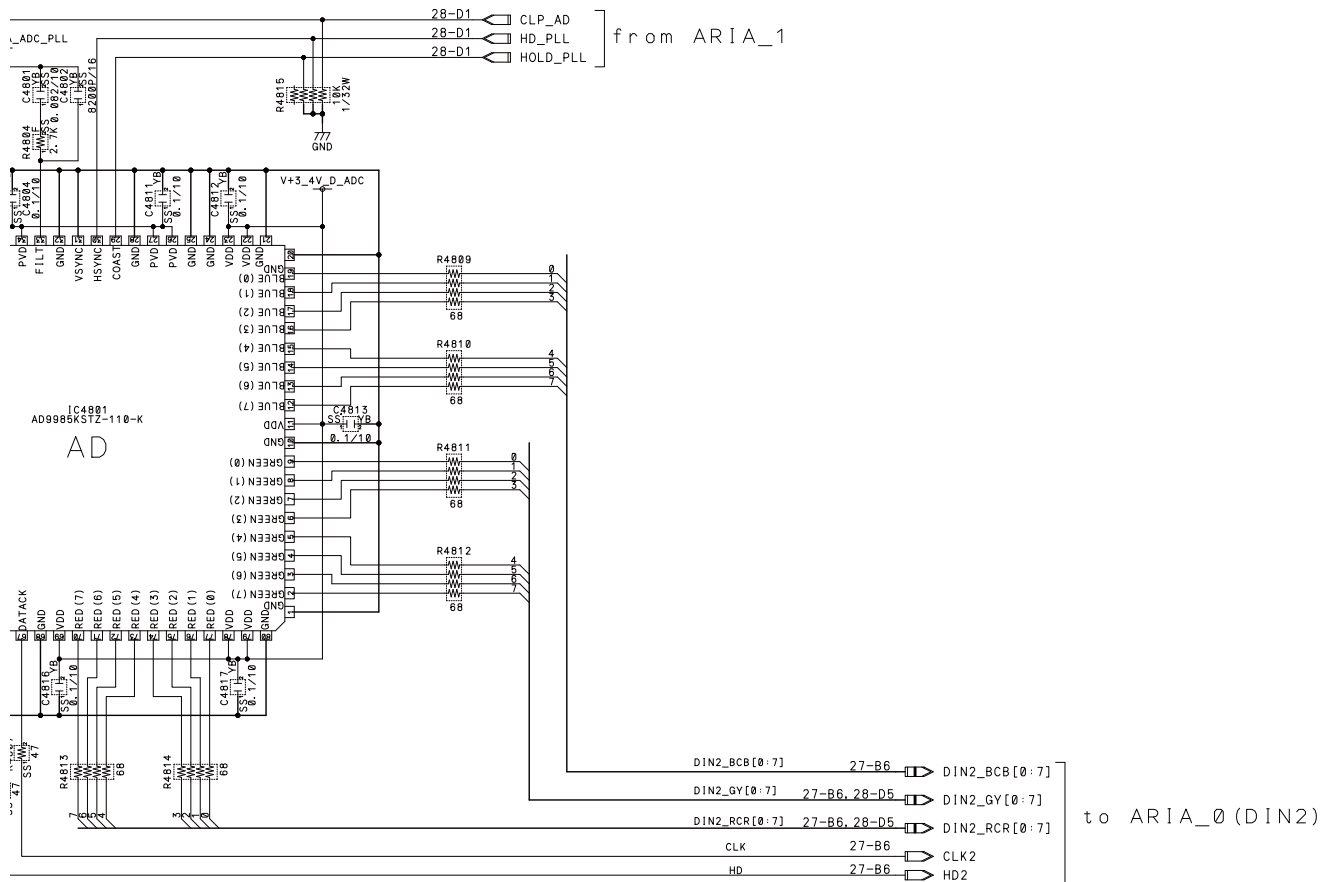
B

C

D

E

F



MODEL

ITEM	USED	VACANT
R	4803-4815	
C	4801-4820	
Q		
IC	4801	
F		
X		
L	4801, 4802	
D		
CN		

MAIN ASSY (MR_EU) (09/34)
ADC BLOCK

AWV2570- : AWW1413
AWV2569- : AWW1411
AWV2572- : AWW1411

4



A



Q

□

E

F

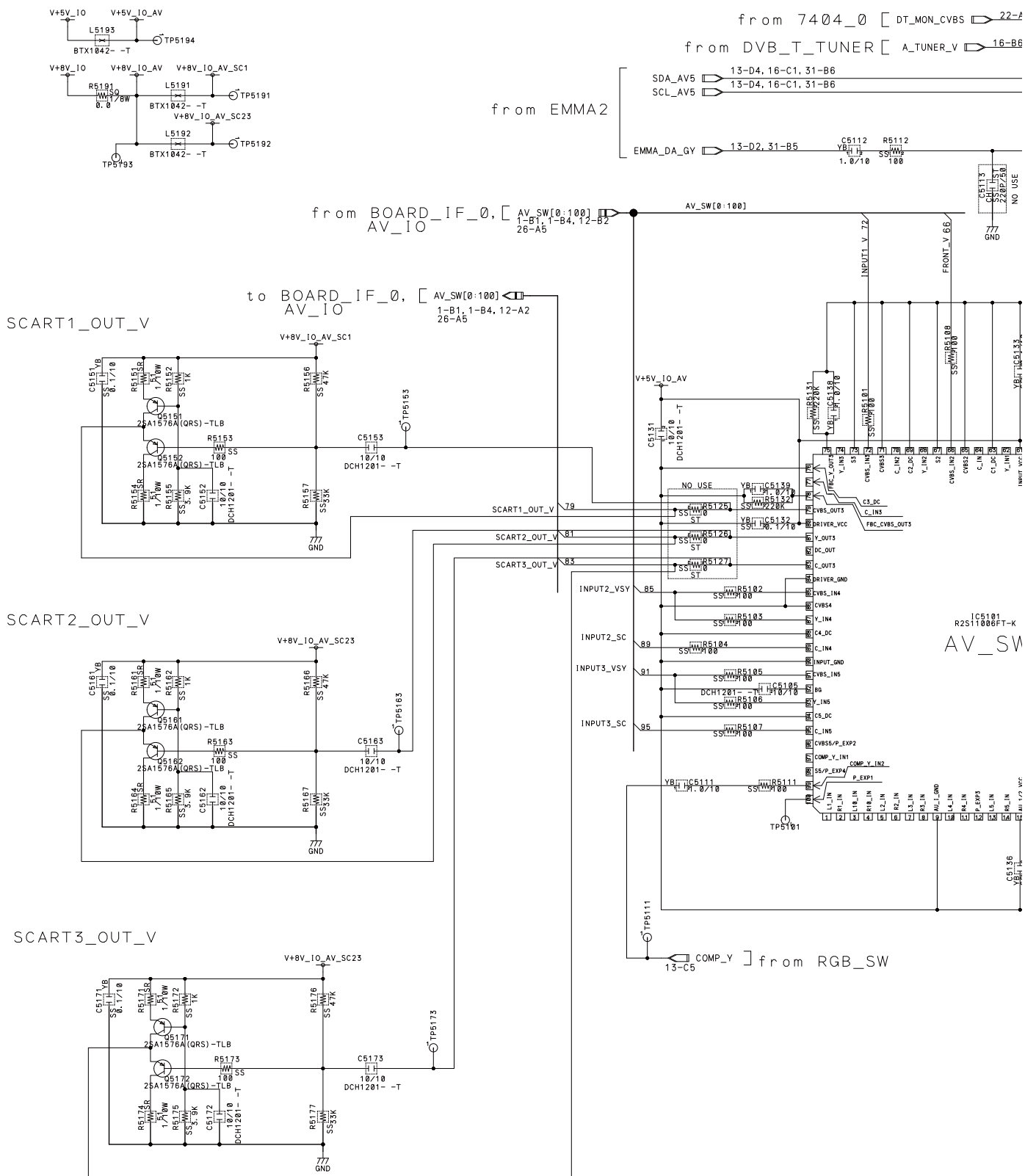
△





△

F

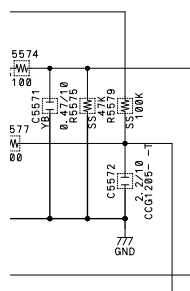


4

F



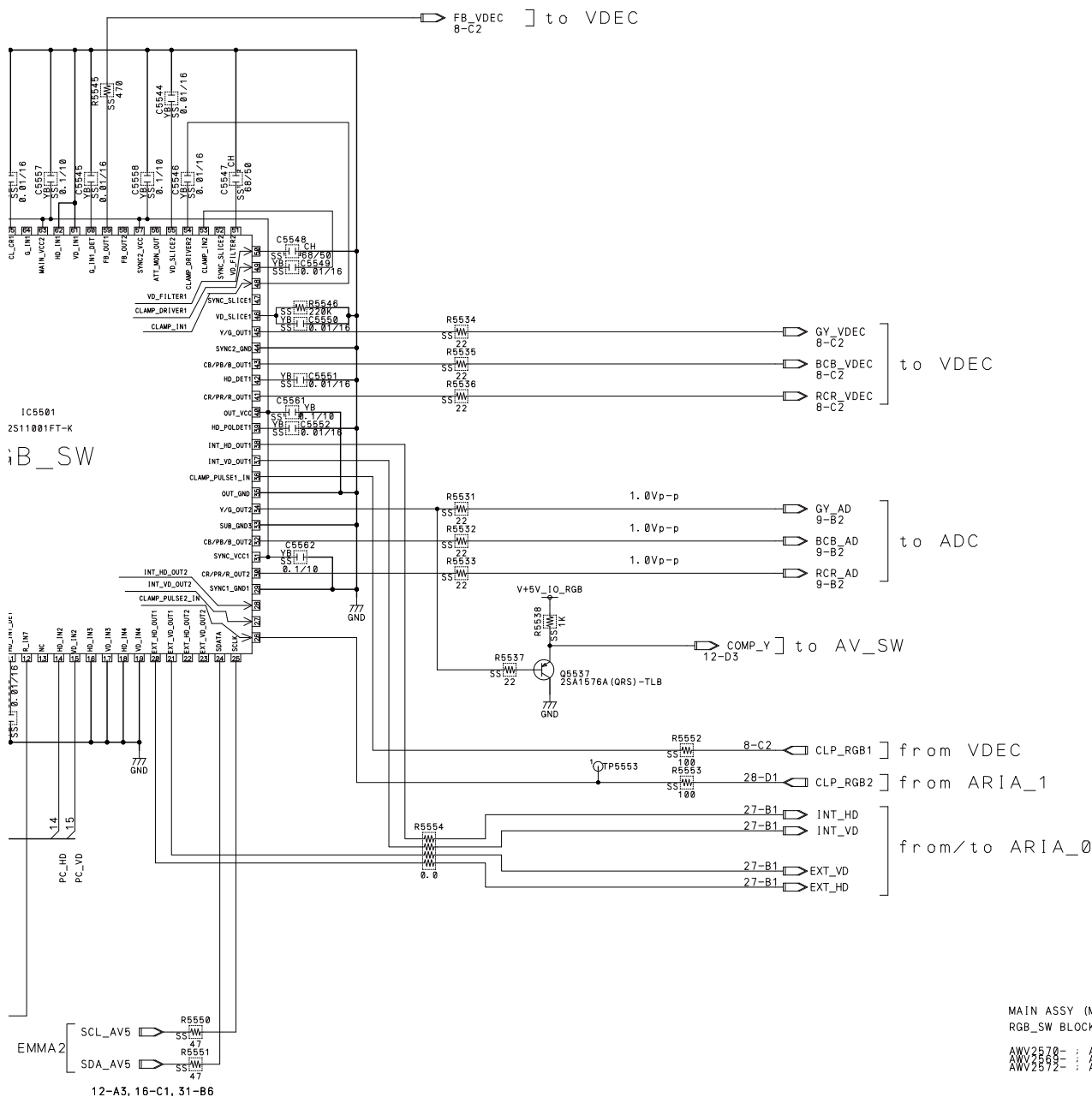
A



MODEL

ITEM	USED	VACANT
R	5501-5513, 5521-5529, 5531-5539, 5541-5549, 5551-5559	5576, 5587
C	5510-5518, 5541-5549, 5571, 5572, 5581, 5582, 5591	
Q	5537, 5571, 5572, 5581, 5582	
IC	5501	
F		
X		
L	5501	
D	5541-5543	5541-5543
CN		

B



D

E

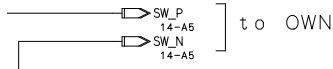
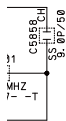
F

△

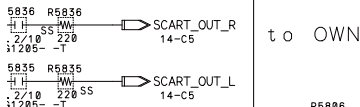
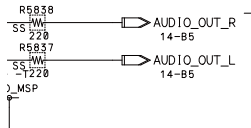


The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

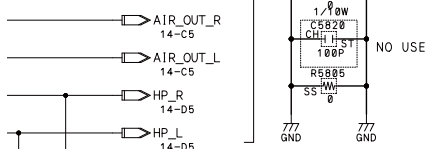
16-B6 Δ AIR_SIF] from DVB_T_TUNER



from OWN

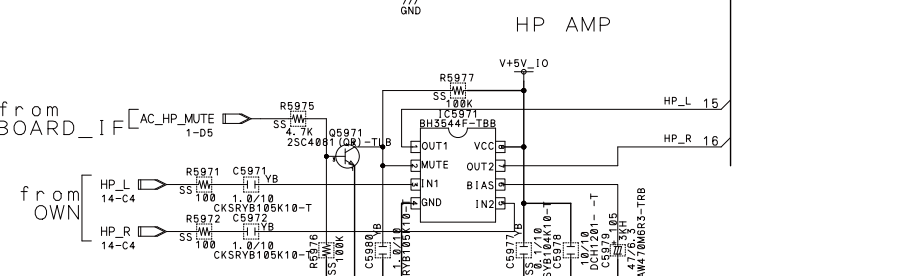
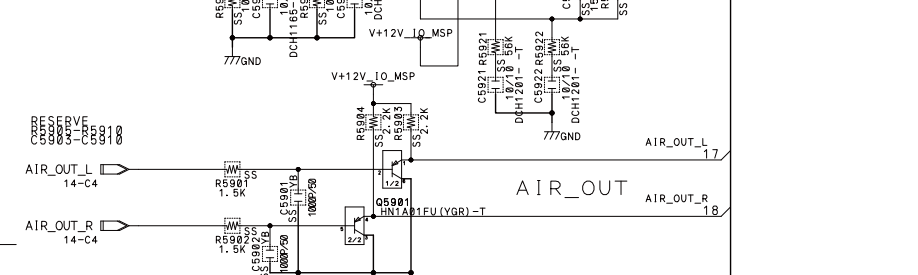
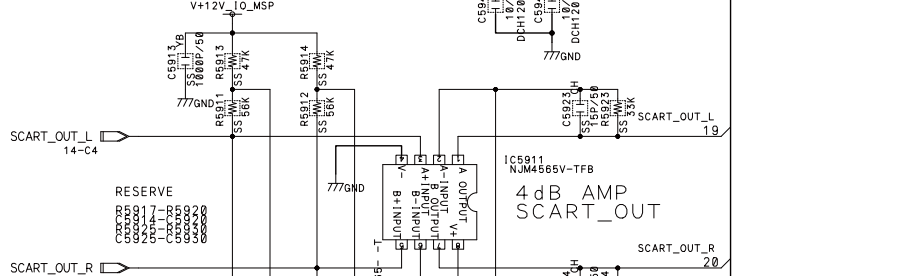
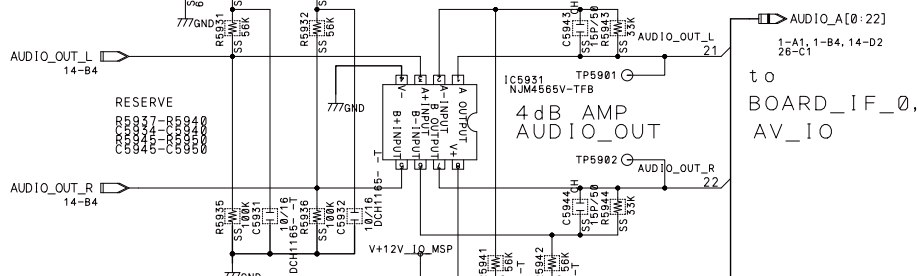
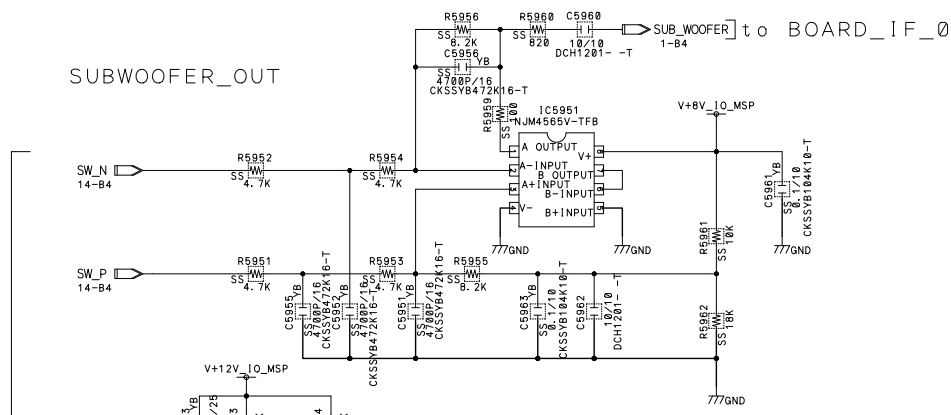


to OWN

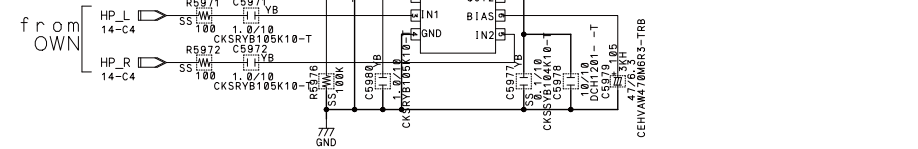


USED	VACANT
5805, 5806, 5807, 5808, 5809, 5810, 5811, 5812, 5813, 5814, 5815, 5816, 5817, 5818, 5819, 5820, 5821, 5822, 5823, 5824, 5825, 5826, 5827, 5828, 5829, 5830, 5831, 5832, 5833, 5834, 5835, 5836, 5837, 5838, 5839, 5840, 5841, 5842, 5843, 5844, 5845, 5846, 5847, 5848, 5849, 5850, 5851, 5852, 5853, 5854, 5855, 5856, 5857, 5858, 5859, 5860, 5861, 5862, 5863, 5864, 5865, 5866, 5867, 5868, 5869, 5870, 5871, 5872, 5873, 5874, 5875, 5876, 5877, 5878, 5879, 5880, 5881, 5882, 5883, 5884, 5885, 5886, 5887, 5888, 5889, 5890, 5891, 5892, 5893, 5894, 5895, 5896, 5897, 5898, 5899, 5900, 5901, 5902, 5903, 5904, 5905, 5906, 5907, 5908, 5909, 5910, 5911, 5912, 5913, 5914, 5915, 5916, 5917, 5918, 5919, 5920, 5921, 5922, 5923, 5924, 5925, 5926, 5927, 5928, 5929, 5930, 5931, 5932, 5933, 5934, 5935, 5936, 5937, 5938, 5939, 5940, 5941, 5942, 5943, 5944, 5945, 5946, 5947, 5948, 5949, 5950, 5951, 5952, 5953, 5954, 5955, 5956, 5957, 5958, 5959, 5960, 5961, 5962, 5963, 5964, 5965, 5966, 5967, 5968, 5969, 5970, 5971, 5972, 5973, 5974, 5975, 5976, 5977, 5978, 5979, 5980, 5981, 5982, 5983, 5984, 5985, 5986, 5987, 5988, 5989, 5990, 5991, 5992, 5993, 5994, 5995, 5996, 5997, 5998, 5999, 6000	5874
5820, 5824, 5825, 5826, 5827, 5828, 5829, 5830, 5831, 5832, 5833, 5834, 5835, 5836, 5837, 5838, 5839, 5840, 5841, 5842, 5843, 5844, 5845, 5846, 5847, 5848, 5849, 5850, 5851, 5852, 5853, 5854, 5855, 5856, 5857, 5858, 5859, 5860, 5861, 5862, 5863, 5864, 5865, 5866, 5867, 5868, 5869, 5870, 5871, 5872, 5873, 5874, 5875, 5876, 5877, 5878, 5879, 5880, 5881, 5882, 5883, 5884, 5885, 5886, 5887, 5888, 5889, 5890, 5891, 5892, 5893, 5894, 5895, 5896, 5897, 5898, 5899, 5900, 5901, 5902, 5903, 5904, 5905, 5906, 5907, 5908, 5909, 5910, 5911, 5912, 5913, 5914, 5915, 5916, 5917, 5918, 5919, 5920, 5921, 5922, 5923, 5924, 5925, 5926, 5927, 5928, 5929, 5930, 5931, 5932, 5933, 5934, 5935, 5936, 5937, 5938, 5939, 5940, 5941, 5942, 5943, 5944, 5945, 5946, 5947, 5948, 5949, 5950, 5951, 5952, 5953, 5954, 5955, 5956, 5957, 5958, 5959, 5960, 5961, 5962, 5963, 5964, 5965, 5966, 5967, 5968, 5969, 5970, 5971, 5972, 5973, 5974, 5975, 5976, 5977, 5978, 5979, 5980, 5981, 5982, 5983, 5984, 5985, 5986, 5987, 5988, 5989, 5990, 5991, 5992, 5993, 5994, 5995, 5996, 5997, 5998, 5999, 6000	5805, 5806, 5816, 5820
866, 5901, 5971	5866
801, 5911, 5931, 5951, 5971	
801	
807, 5808, 5866	5866

SUBWOOFER_OUT



from BOARD_IF [AC_HP_MUTE 1-D5]



MAIN ASSY (MR_EU) (14/34)
MSP BLOCK

AWV2570 : AWW1413
AWV2565 : AWW1411
AWV2572 : AWW1411

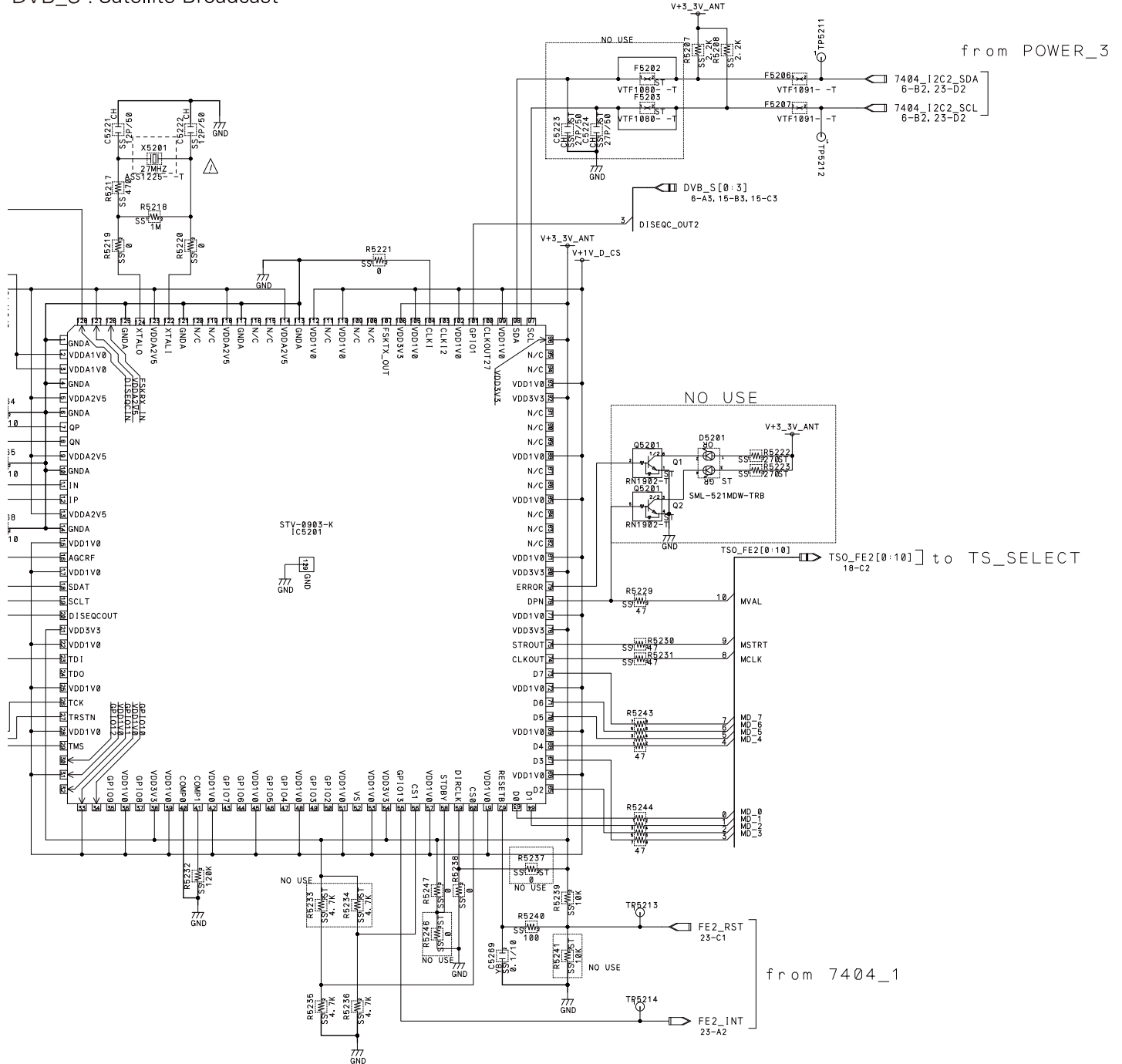
4



The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

DVB_S : Satellite Broadcast

ITEM	USED	VACANT
R	5201-5247	5202, 5203, 5210, 5222-5224, 5235, 5248, 5249, 5249, 5249, 5249
c	5201-5271	5205-5211, 5223-5224, 5266, 5270, 5271
Q	5201	5201
IC	5201	
F	5201-5203, 5206, 5207	5202, 5203
X	5201	
L	5201, 5202	5201
D	5201-5203	5201
U	5201	



MAIN ASSY (MR_EU) (15/34)
DVB_S_TUNER_BLK
AWV2570 : AWW1413
AWV2568 : AWW1411
AWV2572 : AWW1411

△

A



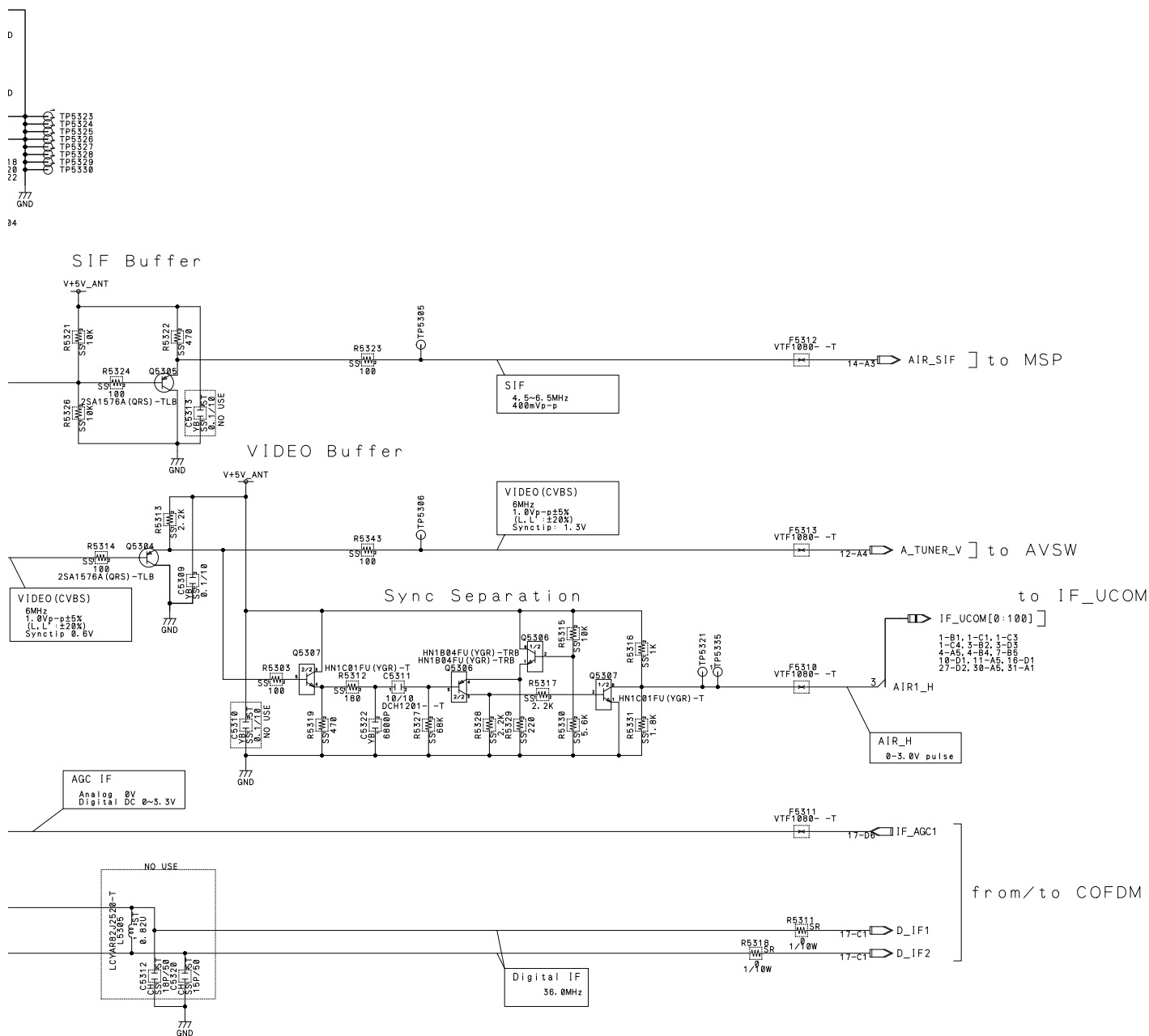
C

D

E

F

36

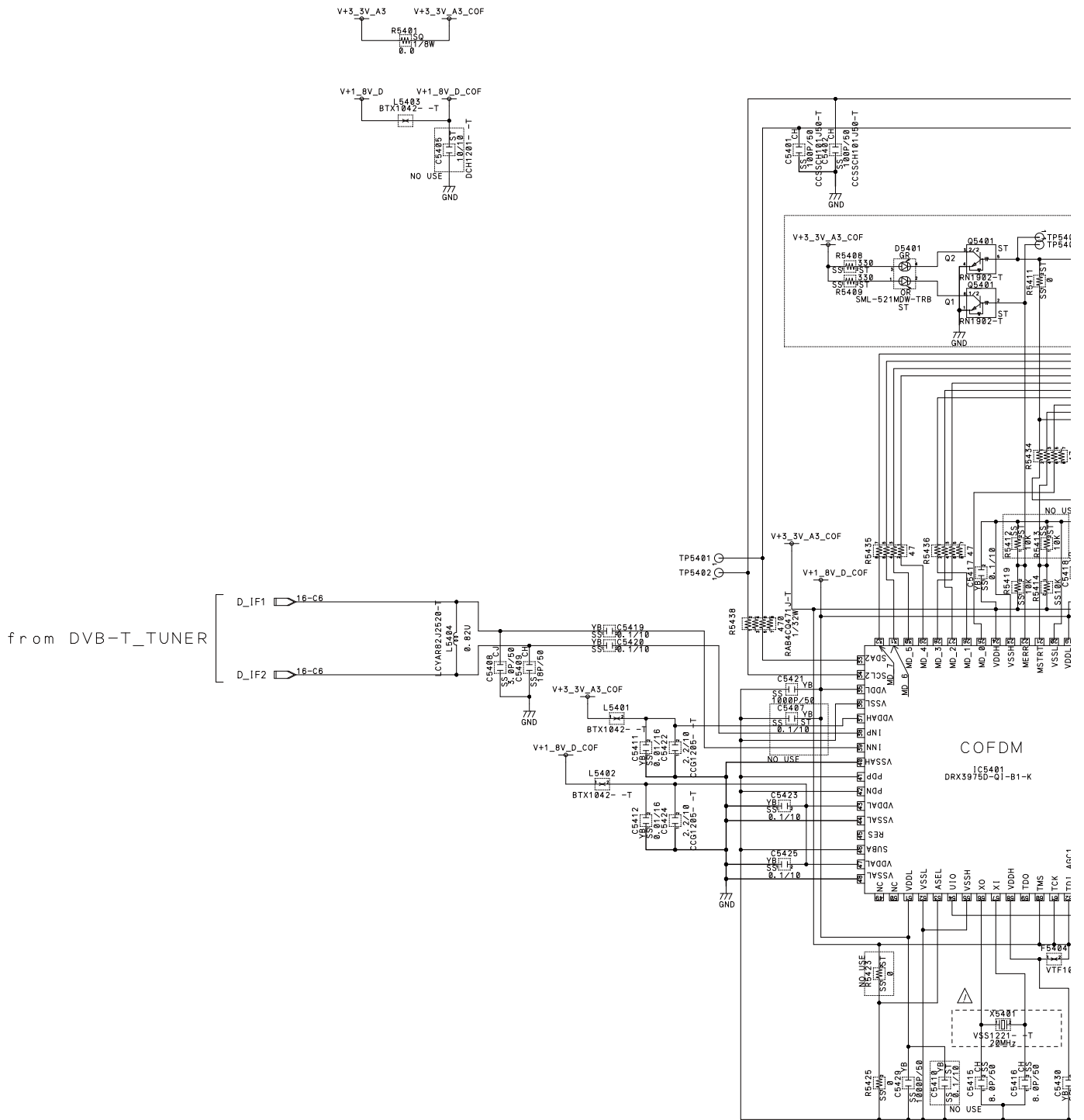



MODEL	USED	VACANT
R	5301-5319, 5321-5324, 5326-5331, 5343	
C	5301-5304, 5306, 5307, 5309-5322, 5324-5330	5301, 5302, 5304, 5306, 5310, 5321, 5325-5328
Q	5303-5308	
IC	5301	
F	5301-5313	
U	5301	
L	5301-5308	5302, 5305
D	5301	
CN		

MAIN ASSY (MR_EU) (16/34)
DVB_T_TUNER BLK

AWW2570 : AWW1413
AWW2569 : AWW1411
AWW2572 : AWW1411

10.18 MAIN BLOCK ASSY (17/33) [COFDM BLOCK]

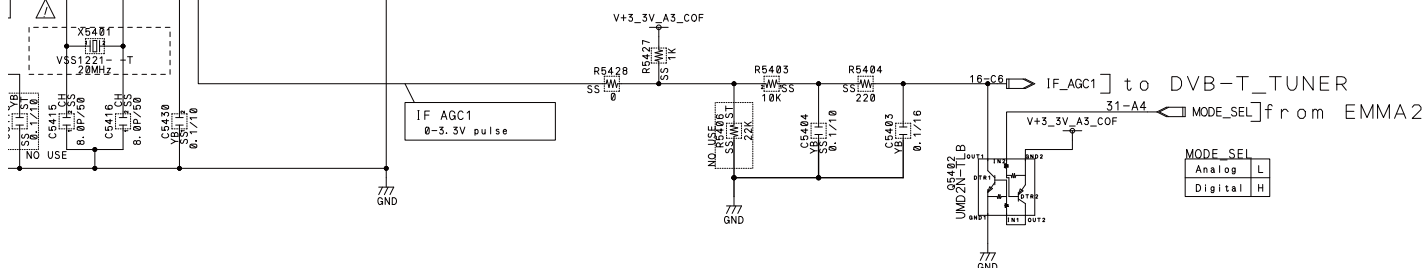
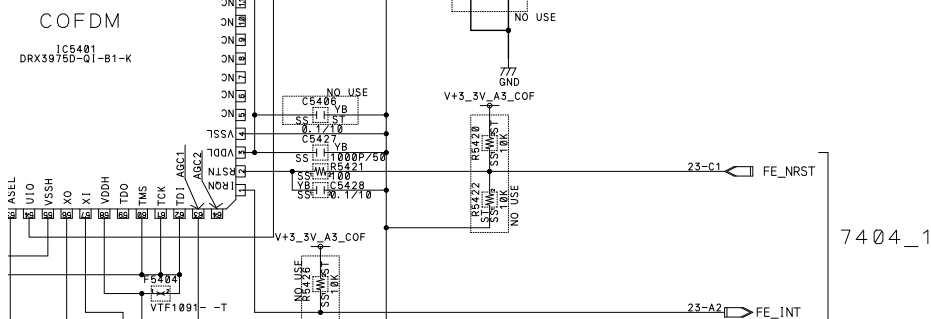
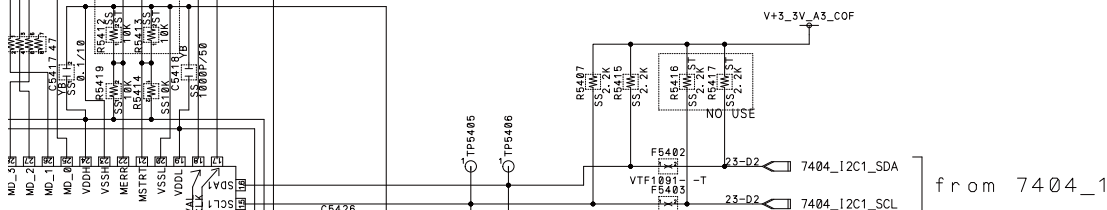
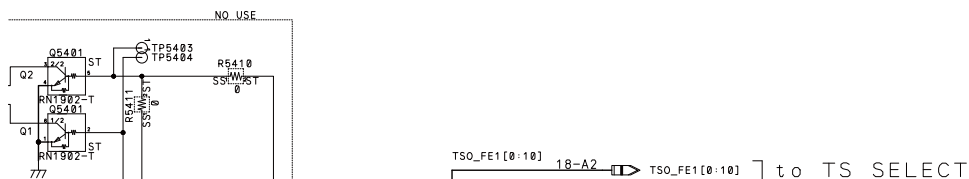


The  mark found on some component should be replaced with same parts regulation authorized of identical

16-D1 → SCL_TU
16-D1 → SDA_TU } to DVB-T_TUNER

MODEL

ITEM	USED	VACANT
R	5401, 5403, 5411, 5419, 5423, 5426, 5428, 5434, 5436, 5438	5406, 5408, 5413, 5416, 5417, 5420, 5422, 5425, 5426
C	5401-5430	5405, 5406, 5407, 5410, 5413, 5414
Q	5401, 5402	5401
IC	5401	
F	5402-5404	
X	5401	
L	5401-5404	
D	5401	5401
CN		



found on some component parts
replaced with same parts (safety
authorized) of identical designation.

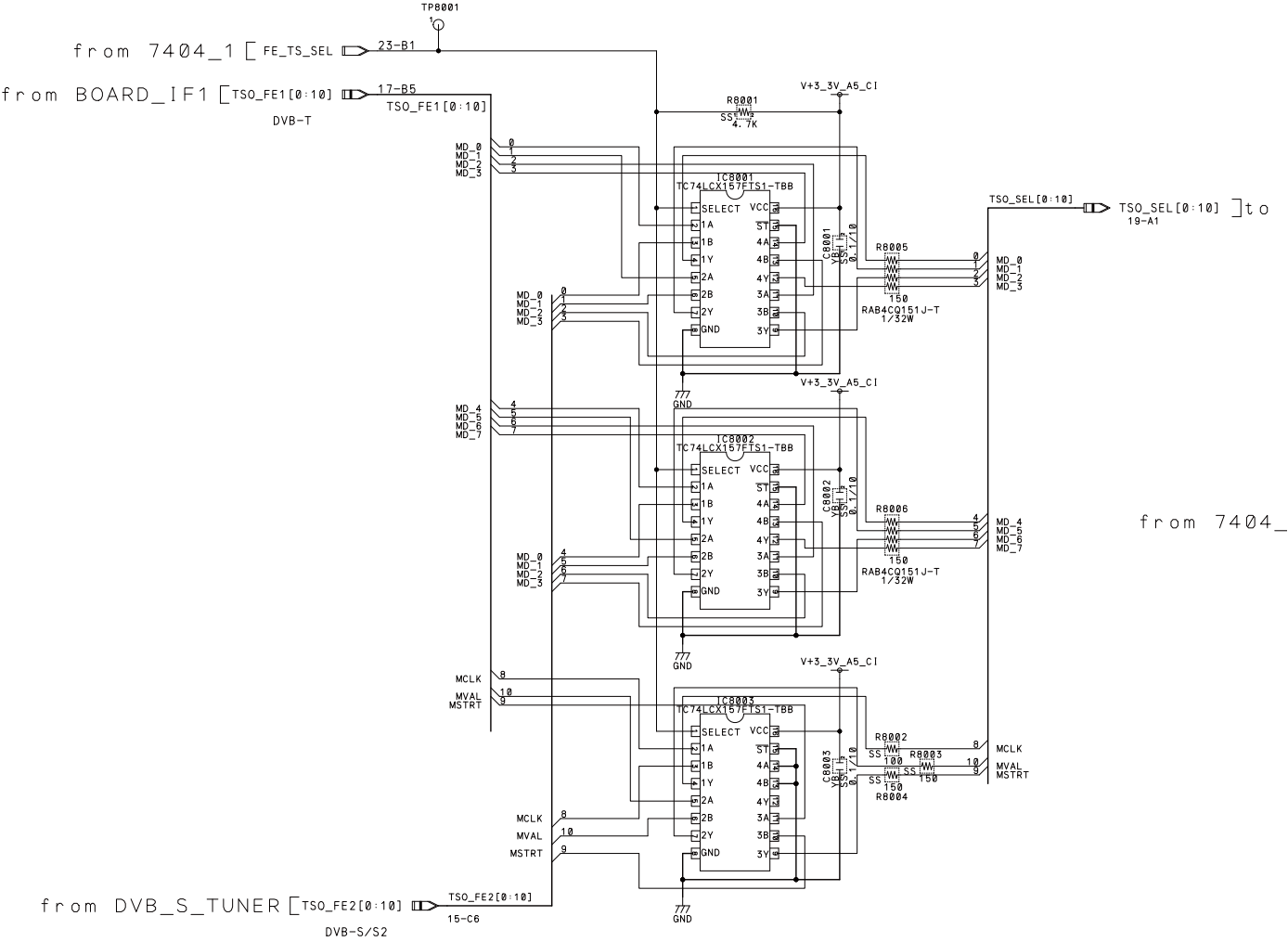
MAIN ASSY (MR_EU) (17/34)
COFDM BLOCK

AWV2570 : AWW1413
AWV2568 : AWW1411
AWV2572 : AWW1411

10.19 MAIN BLOCK ASSY (18/33) [TS_SELECT BLOCK]

FE_TS_SEL : Select DVB-T or DVB-S tuner

High	DVB-S/S2
Low	DVB-T



A

B

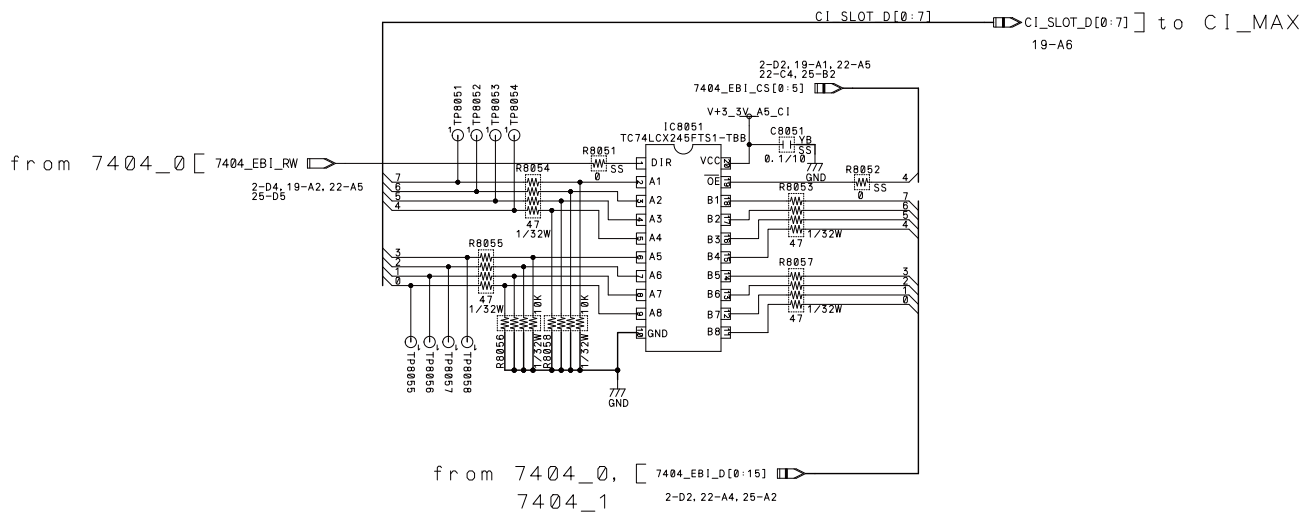
C

D

E

F

SO_SEL[0:10]] to C IMAX
19-A1



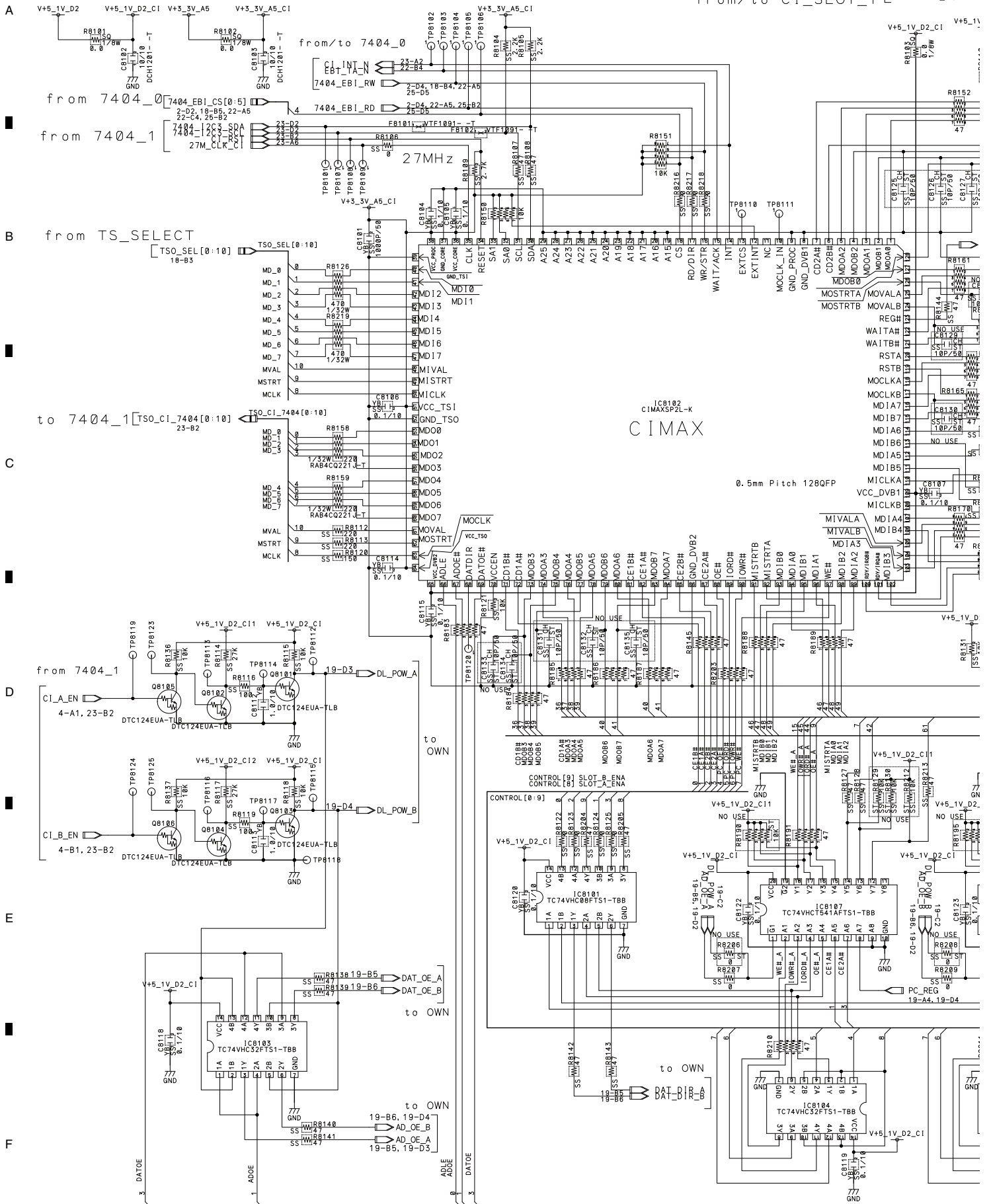
MODEL		
ITEM	USED	VACANT
R	8001-8006, 8051-8058	
C	8001-8003, 8051	
Q		
IC	8001-8003, 8051	
F		
X		
L		
D		
CN		

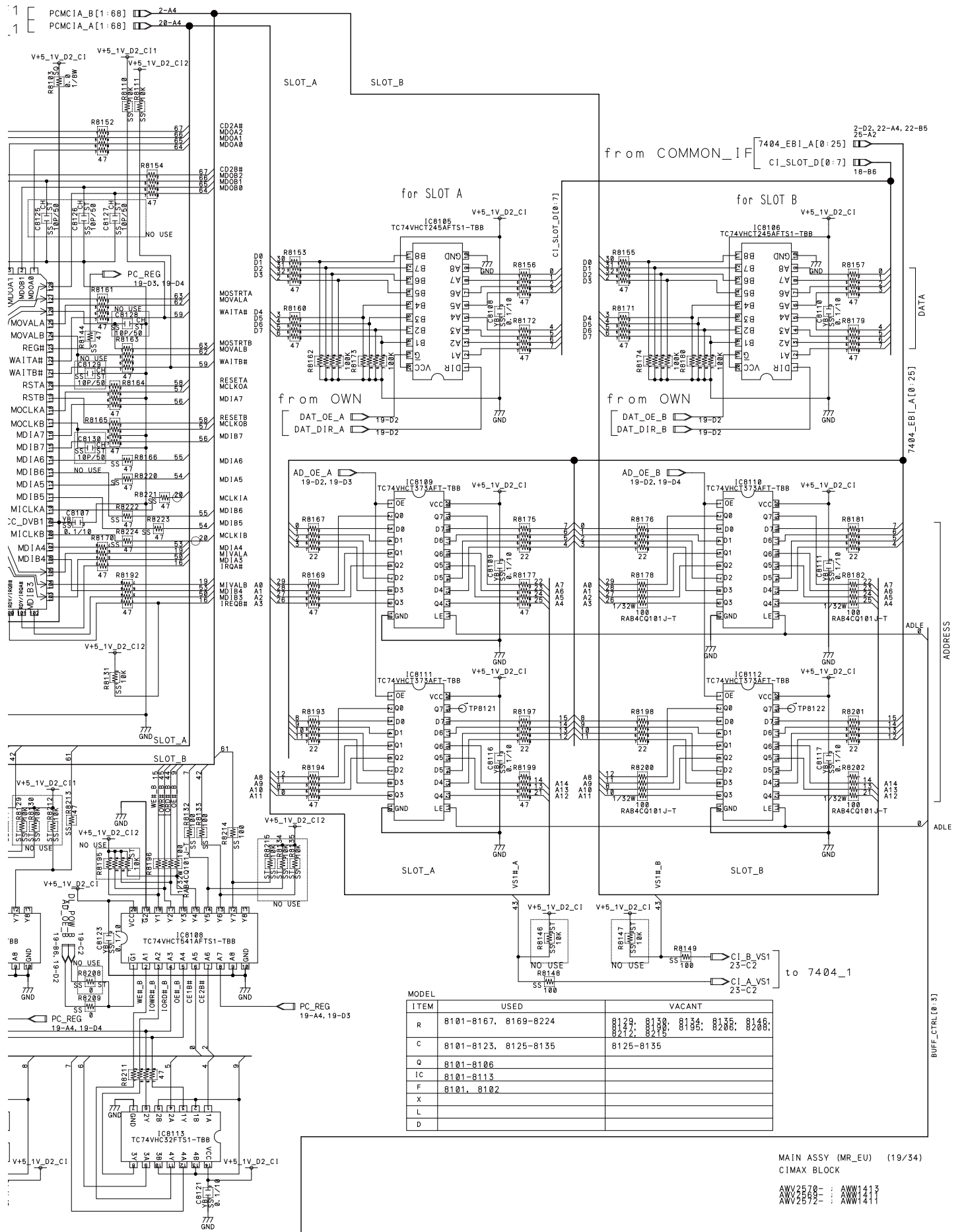
MAIN ASSY (MR_EU) (18/34)
TS_SELECT BLOCK

AWV2570- : AWW1413
AWV2568- : AWW1411
AWV2572- : AWW1411

10.20 MAIN BLOCK ASSY (19/33) [CIMAX BLOCK]

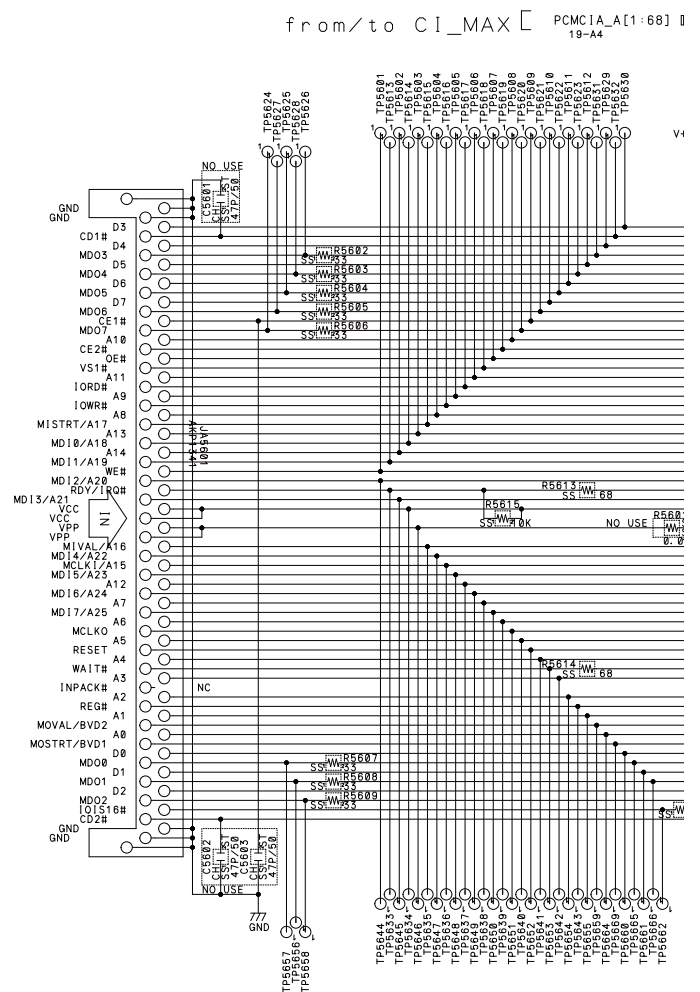
from/to BOARD_IF1 PCMCIA_B[1:68]
from/to CI_SLOT_1 PCMCIA_A[1:68]





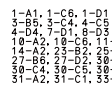
MODEL	USED	VACANT
R	8101-8167, 8169-8224	8129, 8135, 8136, 8146, 8212, 8215, 8216, 8217, 8218, 8219, 8220, 8221, 8222, 8223, 8224, 8225, 8226, 8227, 8228, 8229, 8230, 8231, 8232, 8233, 8234, 8235, 8236, 8237, 8238, 8239, 8240, 8241, 8242, 8243, 8244, 8245, 8246, 8247, 8248, 8249, 8250, 8251, 8252, 8253, 8254, 8255, 8256, 8257, 8258, 8259, 8260, 8261, 8262, 8263, 8264, 8265, 8266, 8267, 8268, 8269, 8270, 8271, 8272, 8273, 8274, 8275, 8276, 8277, 8278, 8279, 8280, 8281, 8282, 8283, 8284, 8285, 8286, 8287, 8288, 8289, 8290, 8291, 8292, 8293, 8294, 8295, 8296, 8297, 8298, 8299, 8300, 8301, 8302, 8303, 8304, 8305, 8306, 8307, 8308, 8309, 8310, 8311, 8312, 8313, 8314, 8315, 8316, 8317, 8318, 8319, 8320, 8321, 8322, 8323, 8324, 8325, 8326, 8327, 8328, 8329, 8330, 8331, 8332, 8333, 8334, 8335, 8336, 8337, 8338, 8339, 8340, 8341, 8342, 8343, 8344, 8345, 8346, 8347, 8348, 8349, 8350, 8351, 8352, 8353, 8354, 8355, 8356, 8357, 8358, 8359, 8360, 8361, 8362, 8363, 8364, 8365, 8366, 8367, 8368, 8369, 8370, 8371, 8372, 8373, 8374, 8375, 8376, 8377, 8378, 8379, 8380, 8381, 8382, 8383, 8384, 8385, 8386, 8387, 8388, 8389, 8390, 8391, 8392, 8393, 8394, 8395, 8396, 8397, 8398, 8399, 8400, 8401, 8402, 8403, 8404, 8405, 8406, 8407, 8408, 8409, 8410, 8411, 8412, 8413, 8414, 8415, 8416, 8417, 8418, 8419, 8420, 8421, 8422, 8423, 8424, 8425, 8426, 8427, 8428, 8429, 8430, 8431, 8432, 8433, 8434, 8435, 8436, 8437, 8438, 8439, 8440, 8441, 8442, 8443, 8444, 8445, 8446, 8447, 8448, 8449, 8450, 8451, 8452, 8453, 8454, 8455, 8456, 8457, 8458, 8459, 8460, 8461, 8462, 8463, 8464, 8465, 8466, 8467, 8468, 8469, 8470, 8471, 8472, 8473, 8474, 8475, 8476, 8477, 8478, 8479, 8480, 8481, 8482, 8483, 8484, 8485, 8486, 8487, 8488, 8489, 8490, 8491, 8492, 8493, 8494, 8495, 8496, 8497, 8498, 8499, 8500, 8501, 8502, 8503, 8504, 8505, 8506, 8507, 8508, 8509, 8510, 8511, 8512, 8513, 8514, 8515, 8516, 8517, 8518, 8519, 8520, 8521, 8522, 8523, 8524, 8525, 8526, 8527, 8528, 8529, 8530, 8531, 8532, 8533, 8534, 8535, 8536, 8537, 8538, 8539, 8540, 8541, 8542, 8543, 8544, 8545, 8546, 8547, 8548, 8549, 8550, 8551, 8552, 8553, 8554, 8555, 8556, 8557, 8558, 8559, 8560, 8561, 8562, 8563, 8564, 8565, 8566, 8567, 8568, 8569, 8570, 8571, 8572, 8573, 8574, 8575, 8576, 8577, 8578, 8579, 8580, 8581, 8582, 8583, 8584, 8585, 8586, 8587, 8588, 8589, 8590, 8591, 8592, 8593, 8594, 8595, 8596, 8597, 8598, 8599, 8600, 8601, 8602, 8603, 8604, 8605, 8606, 8607, 8608, 8609, 8610, 8611, 8612, 8613, 8614, 8615, 8616, 8617, 8618, 8619, 8620, 8621, 8622, 8623, 8624, 8625, 8626, 8627, 8628, 8629, 8630, 8631, 8632, 8633, 8634, 8635, 8636, 8637, 8638, 8639, 8640, 8641, 8642, 8643, 8644, 8645, 8646, 8647, 8648, 8649, 8650, 8651, 8652, 8653, 8654, 8655, 8656, 8657, 8658, 8659, 8660, 8661, 8662, 8663, 8664, 8665, 8666, 8667, 8668, 8669, 8670, 8671, 8672, 8673, 8674, 8675, 8676, 8677, 8678, 8679, 8680, 8681, 8682, 8683, 8684, 8685, 8686, 8687, 8688, 8689, 8690, 8691, 8692, 8693, 8694, 8695, 8696, 8697, 8698, 8699, 8700, 8701, 8702, 8703, 8704, 8705, 8706, 8707, 8708, 8709, 8710, 8711, 8712, 8713, 8714, 8715, 8716, 8717, 8718, 8719, 8720, 8721, 8722, 8723, 8724, 8725, 8726, 8727, 8728, 8729, 8730, 8731, 8732, 8733, 8734, 8735, 8736, 8737, 8738, 8739, 8740, 8741, 8742, 8743, 8744, 8745, 8746, 8747, 8748, 8749, 8750, 8751, 8752, 8753, 8754, 8755, 8756, 8757, 8758, 8759, 8760, 8761, 8762, 8763, 8764, 8765, 8766, 8767, 8768, 8769, 8770, 8771, 8772, 8773, 8774, 8775, 8776, 8777, 8778, 8779, 8780, 8781, 8782, 8783, 8784, 8785, 8786, 8787, 8788, 8789, 8790, 8791, 8792, 8793, 8794, 8795, 8796, 8797, 8798, 8799, 8800, 8801, 8802, 8803, 8804, 8805, 8806, 8807, 8808, 8809, 8810, 8811, 8812, 8813, 8814, 8815, 8816, 8817, 8818, 8819, 8820, 8821, 8822, 8823, 8824, 8825, 8826, 8827, 8828, 8829, 8830, 8831, 8832, 8833, 8834, 8835, 8836, 8837, 8838, 8839, 8840, 8841, 8842, 8843, 8844, 8845, 8846, 8847, 8848, 8849, 8850, 8851, 8852, 8853, 8854, 8855, 8856, 8857, 8858, 8859, 8860, 8861, 8862, 8863, 8864, 8865, 8866, 8867, 8868, 8869, 8870, 8871, 8872, 8873, 8874, 8875, 8876, 8877, 8878, 8879, 8880, 8881, 8882, 8883, 8884, 8885, 8886, 8887, 8888, 8889, 8890, 8891, 8892, 8893, 8894, 8895, 8896, 8897, 8898, 8899, 8900, 8901, 8902, 8903, 8904, 8905, 8906, 8907, 8908, 8909, 8910, 8911, 8912, 8913, 8914, 8915, 8916, 8917, 8918, 8919, 8920, 8921, 8922, 8923, 8924, 8925, 8926, 8927, 8928, 8929, 8930, 8931, 8932, 8933, 8934, 8935, 8936, 8937, 8938, 8939, 8940, 8941, 8942, 8943, 8944, 8945, 8946, 8947, 8948, 8949, 8950, 8951, 8952, 8953, 8954, 8955, 8956, 8957, 8958, 8959, 8960, 8961, 8962, 8963, 8964, 8965, 8966, 8967, 8968, 8969, 8970, 8971, 8972, 8973, 8974, 8975, 8976, 8977, 8978, 8979, 8980, 8981, 8982, 8983, 8984, 8985, 8986, 8987, 8988, 8989, 8990, 8991, 8992, 8993, 8994, 8995, 8996, 8997, 8998, 8999, 9000

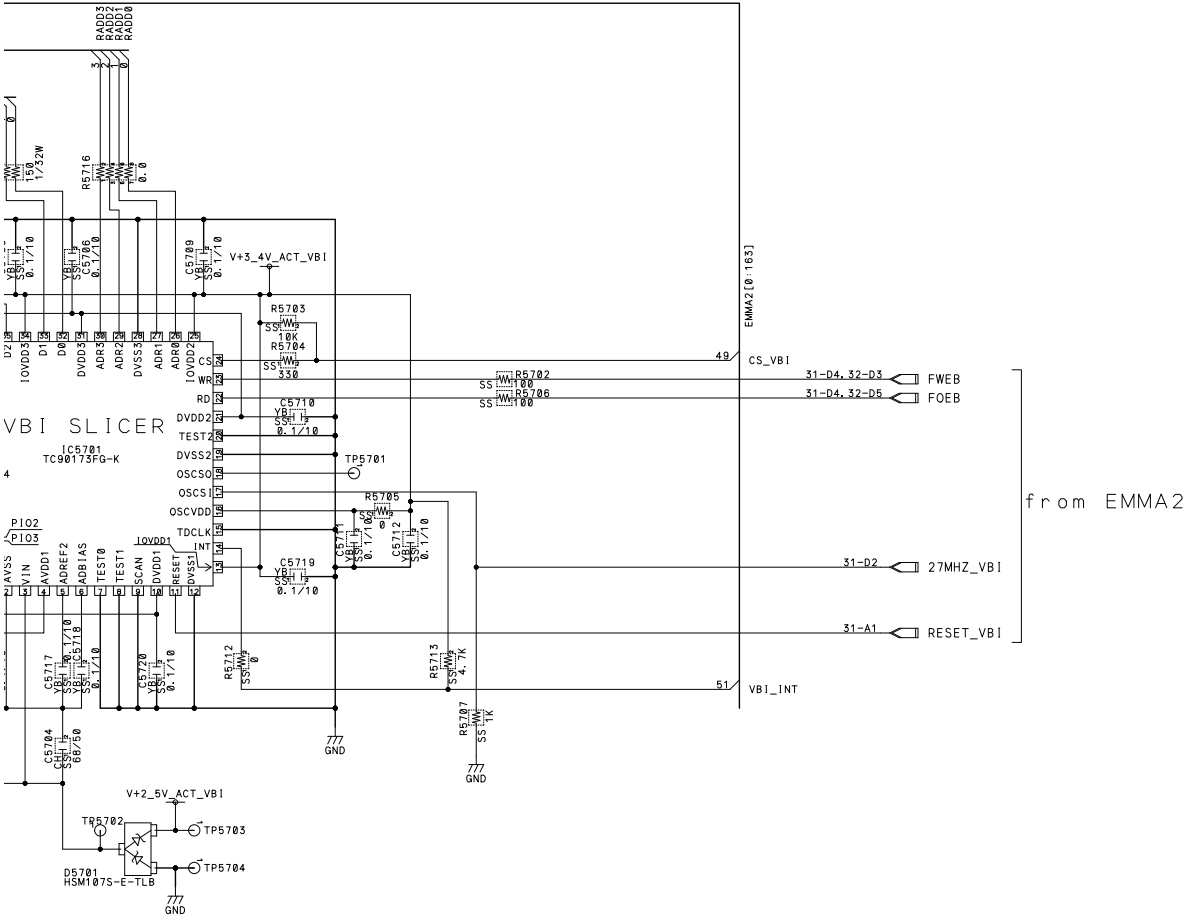
F



4

F





MODEL		
ITEM	USED	VACANT
R	5701-5707, 5709, 5712-5716	
C	5701, 5704-5712, 5714-5720	
Q		
IC	5701	
F		
JA		
L	5701, 5702	
D	5701	
CN		

MAIN ASSY (MR_EU) (21/34)
VBI_SLICER BLOCK
AWV2570- : AWW1413
AWV2569- : AWW1411
AWV2572- : AWW1411

△

4

EBI BUS

ANALOG VIDEO OUT

AUDIO OUT

for Debug

EJTAG
for DebugBBS
for Debug

from/to 7404_DDR

24-D1 MDM_7404[0:7]
24-C1 MDQS_7404[0:7]
24-C1 MCLK0_7404
24-C1 MCLK0B_7404
24-C1 MCLK1_7404
24-C1 MCLK1B_7404

22-D1, 24-B1 MCTRL_7404[0:6]
23-B6, 24-A5, 24-A6
24-C5, 24-C6 VREF_DDR_7404

13/19

C6013
S11H V_B
C6014
S11H V_B
GND

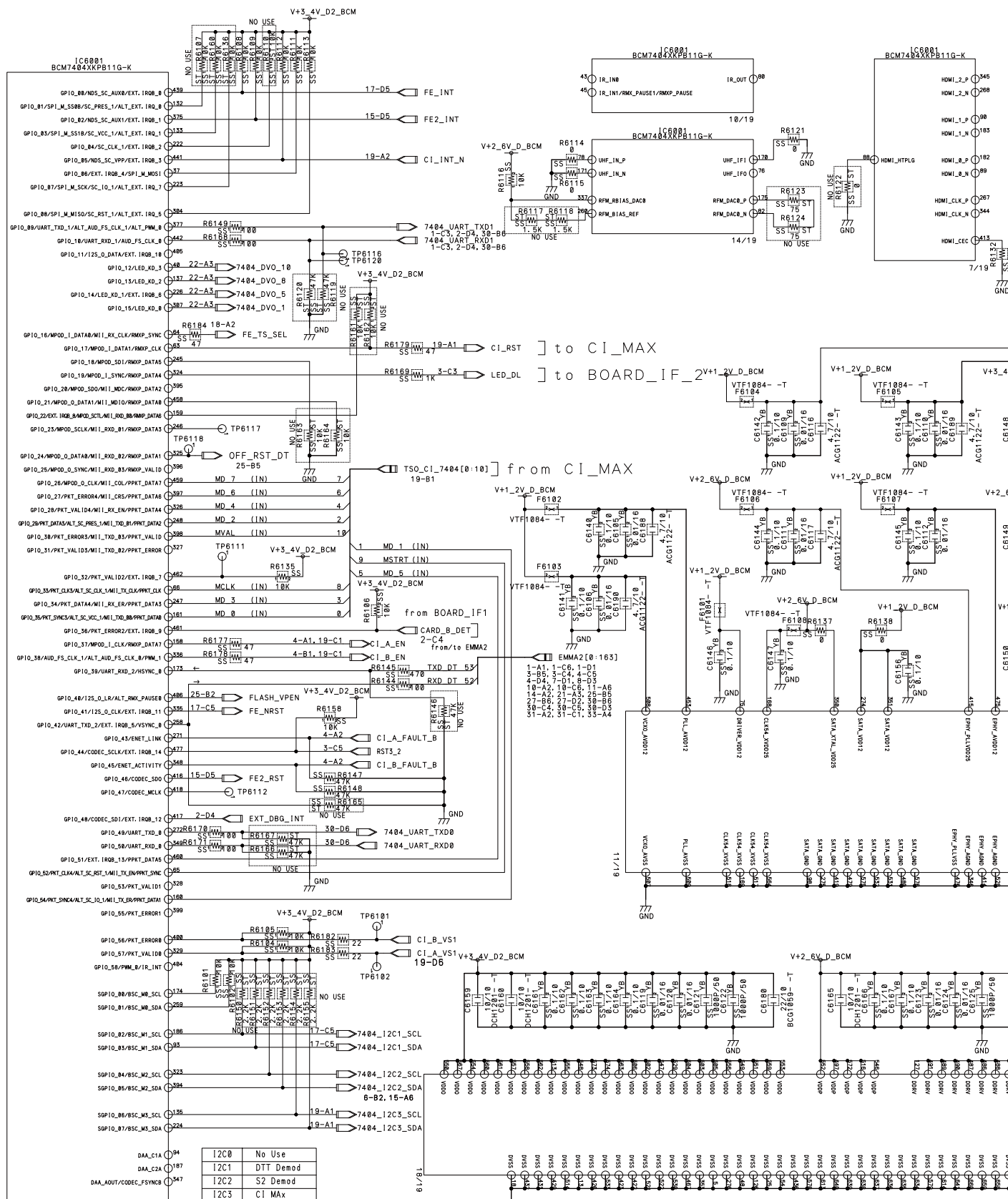
MAIN ASSY (MR_EU) (22/34)
7404_0 BLOCK

AWW2570 : AWW1413
AWW2565 : AWW1411
AWW2572 : AWW1411

KRP-M01

10.24 MAIN BLOCK ASSY (23/33) [7404_1 BLOCK]

A



F

ITEM	USED	VACANT
R	6101-6171, 6177-6179	6107, 6110, 6117-6120, 6122-6125, 6146, 6150
C	6101-6106, 6109-6137, 6139-6190	6102
L	6101-6103, 6111-6118	
IC	6102	
F	6101-6111	
X	6101	

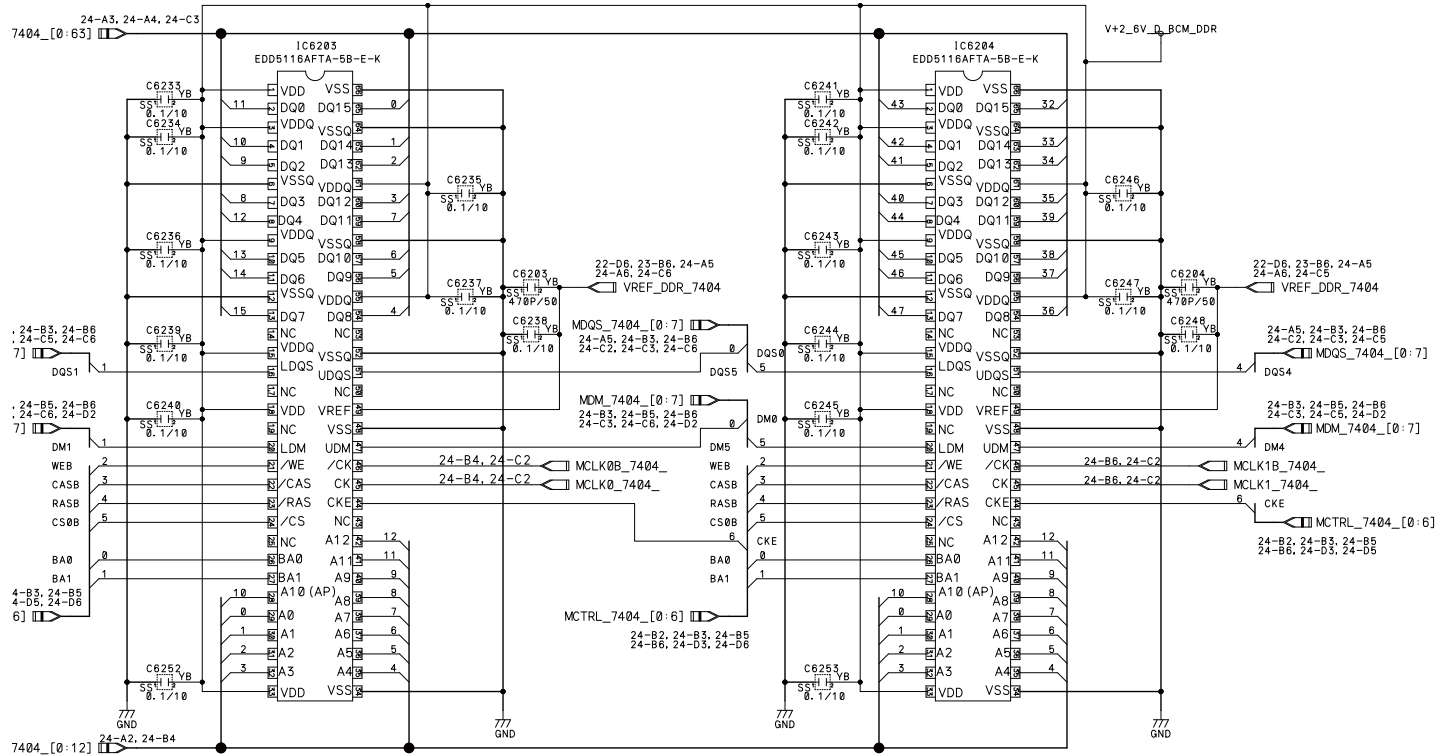
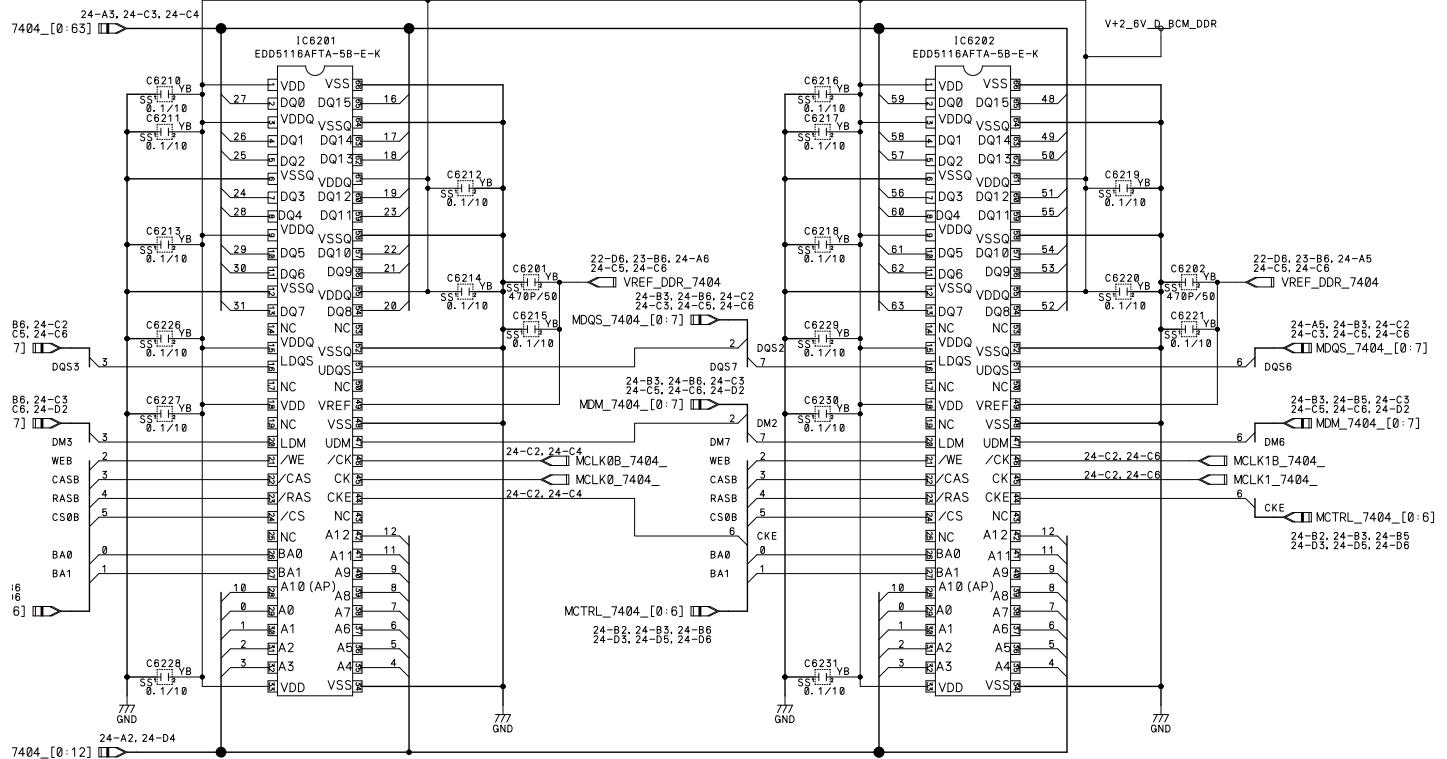
4

MDQ_7404_[0:63] 24-A3, 24-C3, 24-

24 DDR
1bit x 4pcs

IC6201-6204

MAIN EDD5116AFTA-5B-E-K
SUB K4H511638D-UCCC-K



USED	VACANT
3316	
3253	6206
6202	
3204	

MAIN ASSY (MR_EU) (24/34)
7404_DDR BLOCK

AWV2570 : AWW1413
AWV2569 : AWW1411
AWV2572 : AWW1411

△

A



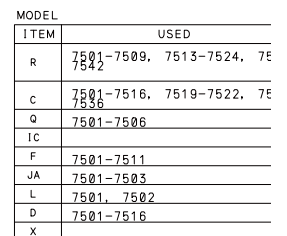
D

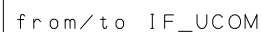


4

△

F





```

MAIN ASSY (MR_EU) (26/34)
AV_IO BLOCK

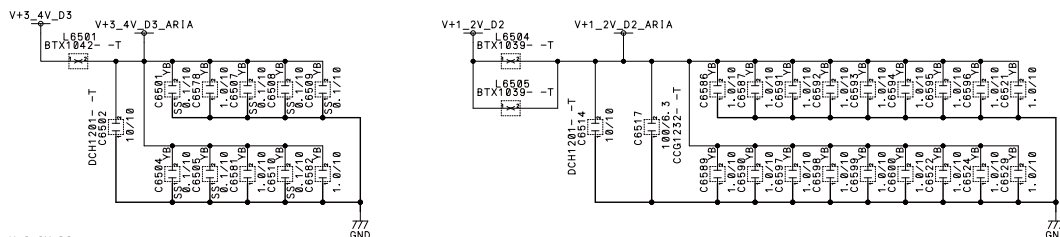
AWV2570- : AWW1413
AWV2569- : AWW1411
AWV2572- : AWW1411

```

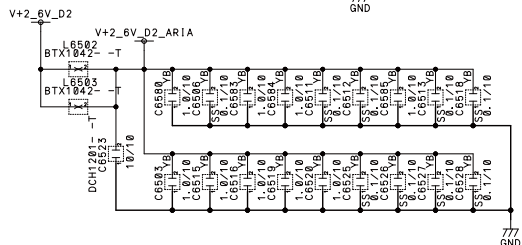
10.28 MAIN BLOCK ASSY (27/33) [ARIA_0 BLOCK]

ITEM	USED
R	6501-6508, 6510-6512, 6515
C	6501-6533, 6575-6578, 6587, 6589-6600
Q	
IC	6501
F	
JA	
L	6501-6509
D	
X	6501

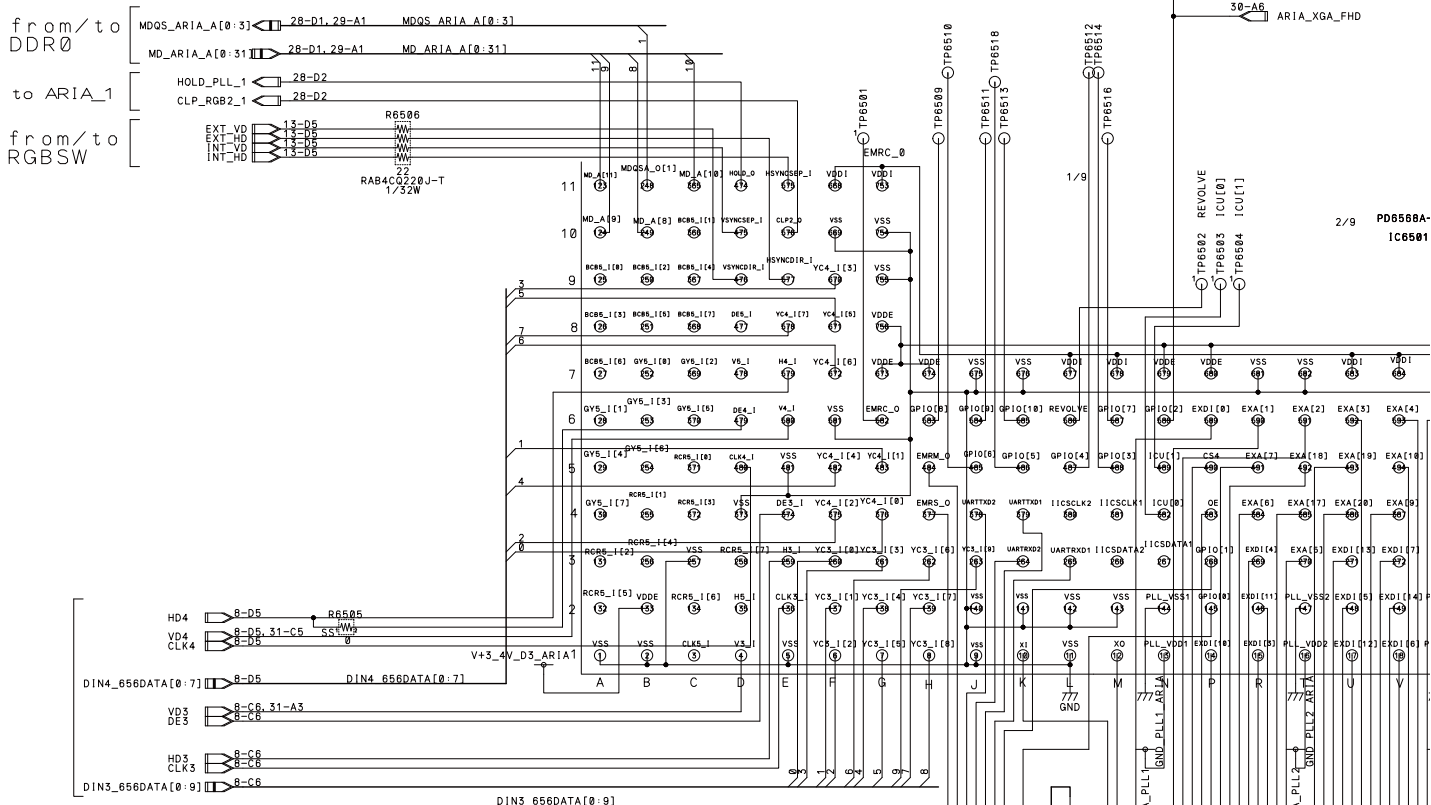
A



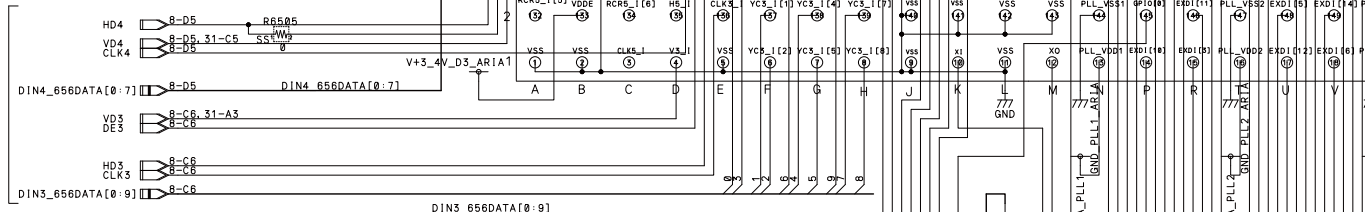
B



C



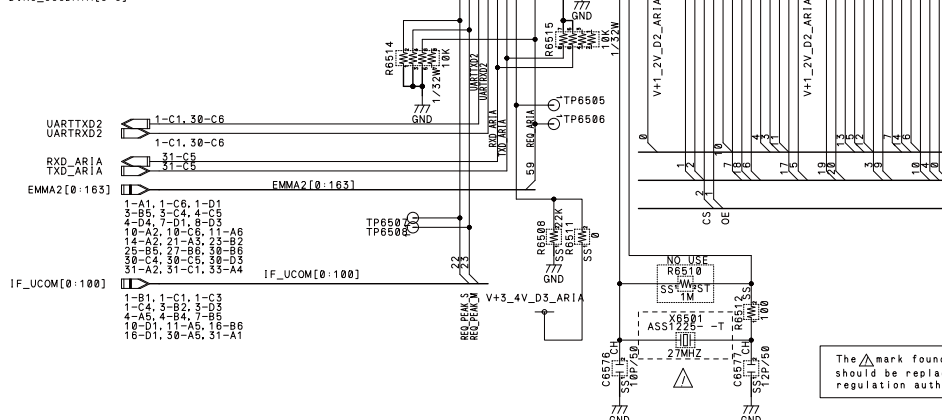
D



E

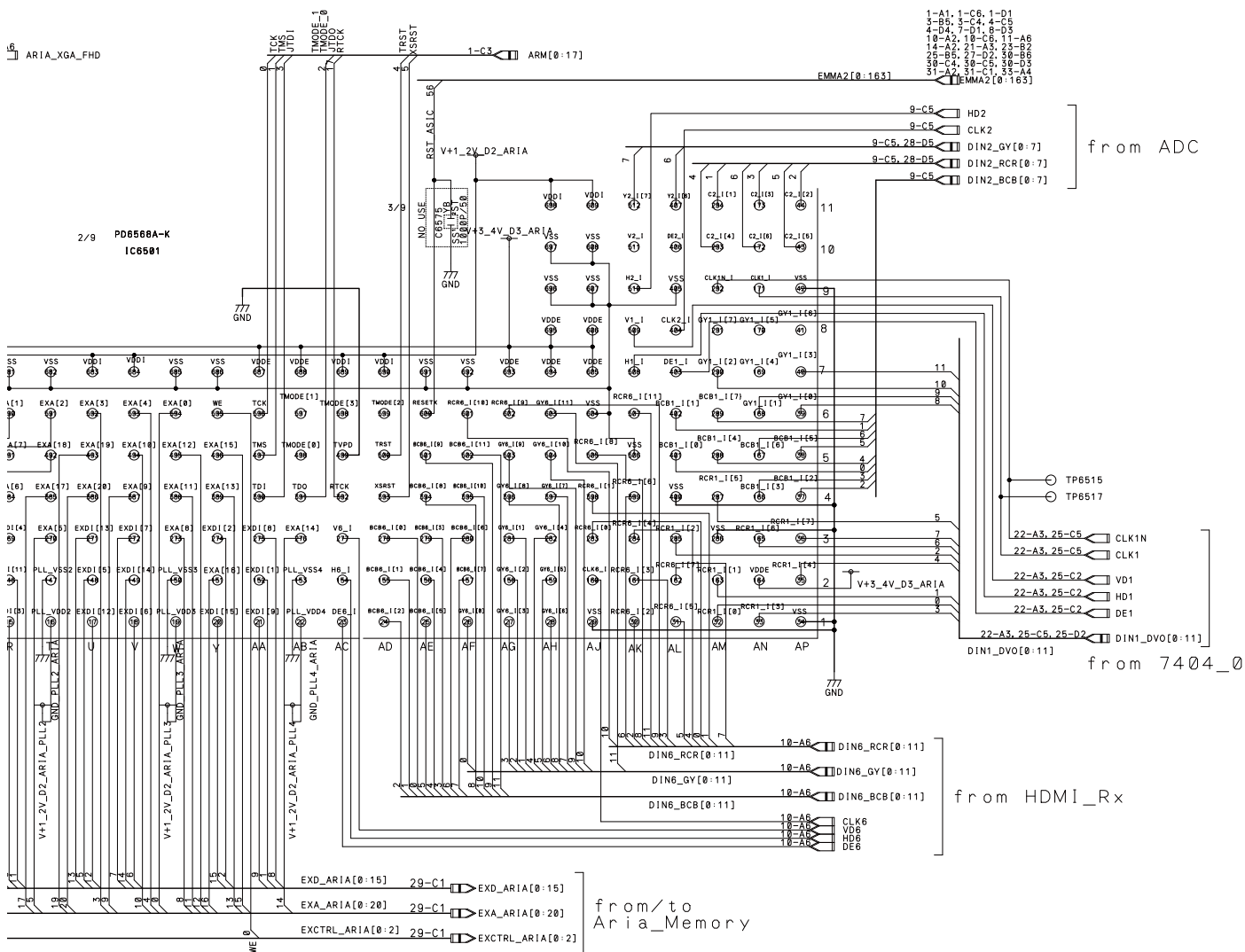
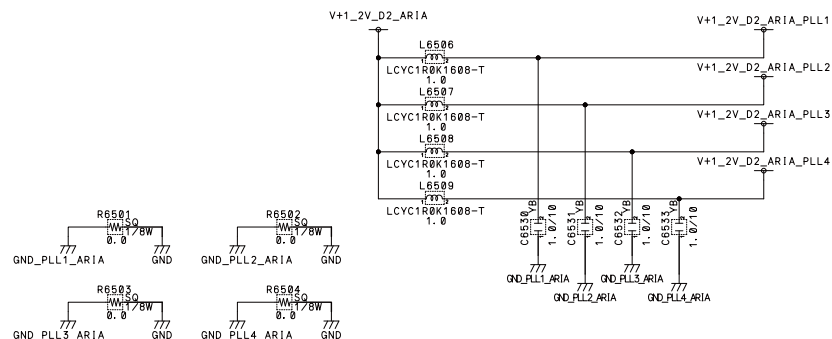
from VDEC

F



The mark found should be replaced by regulation authority

USED	VACANT
6501-6508, 6510-6512, 6514, 6515	6507, 6510
6501-6533, 6575-6578, 6580-6587, 6589-6600	6575
6501	
6501-6509	
6501	



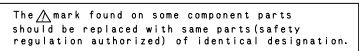
The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

MAIN ASSY (MR_EU) (27/34)
ARIA_0 BLOCK

AWV2570- : AWW1413
AWV2563- : AWW1411
AWV2572- : AWW1411

4

F



MODEL		PD0508A-K
ITEM	USED	
R	6601-6631	6602
C	6609, 6615-6632, 6634-6637	6609, 663
F	6601-6616	
L	6601	

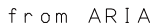


AWV2570-	:	AWW1413
AWV2569-	:	AWW1411
AWV2572-	:	AWW1411

4

DDR _____

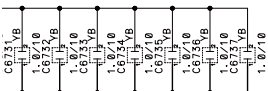
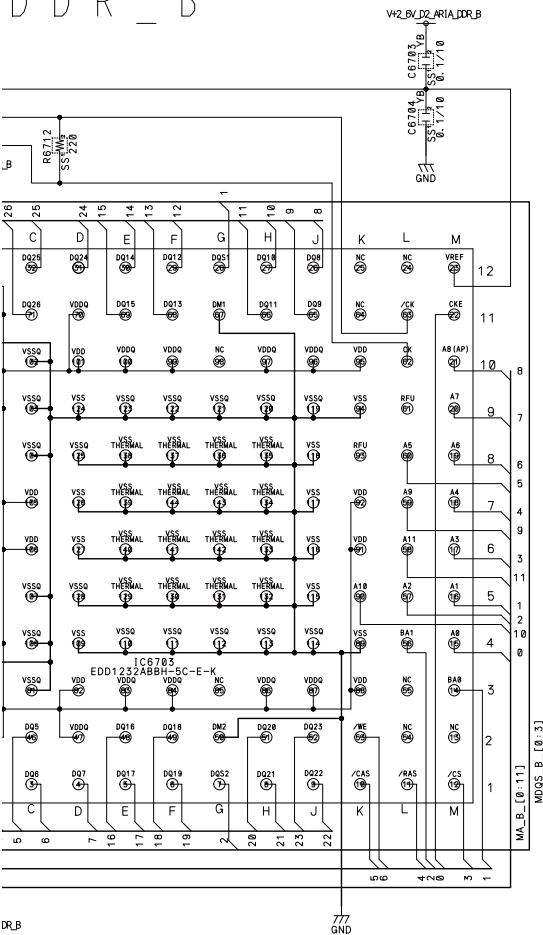
from/to ARIA



ARIA FLASH

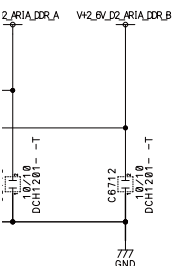
RIA DDR

DDR_B



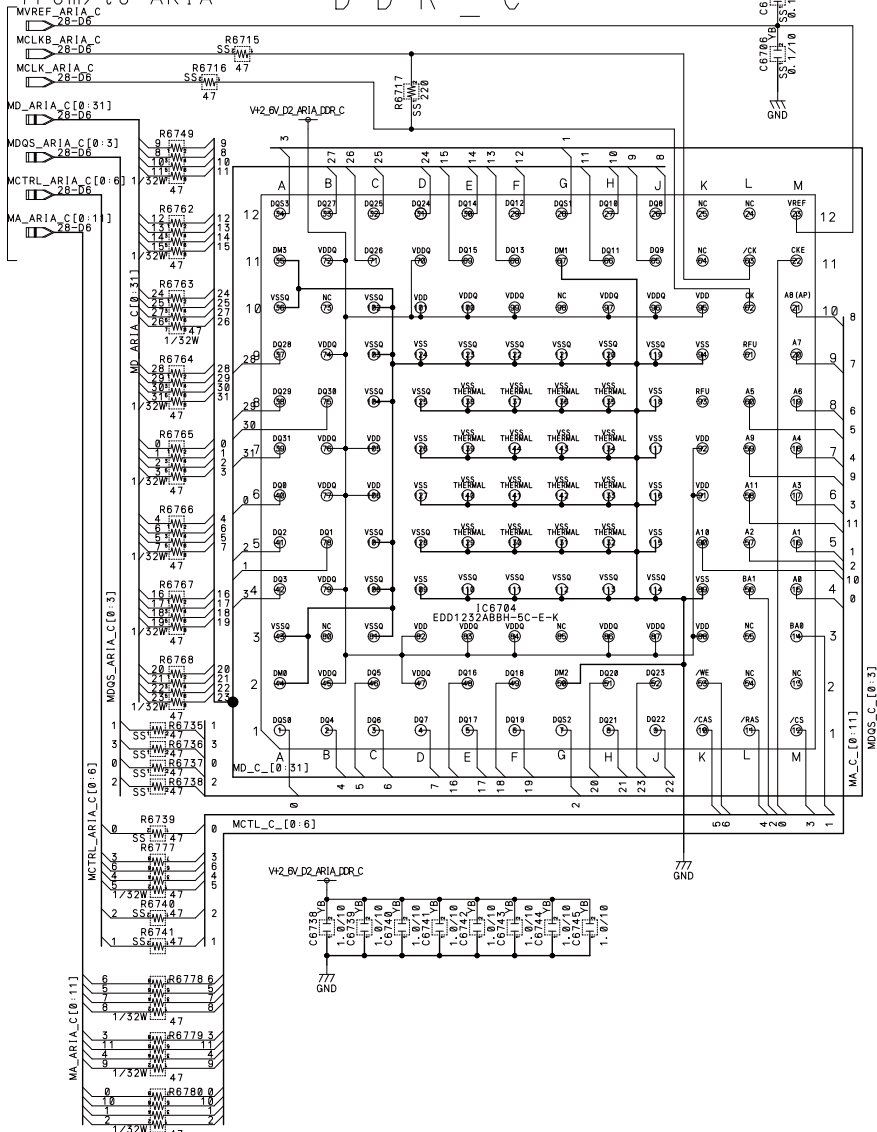
C6702, 6703, 6704 SUB PARTS

- 1st EDD1232ABBH-5C-E-K
- 2nd K4D263238K-VC50-K



from/to ARIA

DDR_C



MODEL		
ITEM	USED	VACANT
R	6705-6707, 6710-6712, 6715-6717, 6720-6741, 6743-6780	6744
C	6701-6708, 6710, 6712, 6714, 6718, 6722-6743	
IC	6701-6704	
L	6701-6703	

MAIN ASSY (MR_EU) (29/34)
ARIA_DDR BLOCK

AWW2570 - : AWW1413
AWW2593 - : AWW1411
AWW2592 - : AWW1411

4

E



△



The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.



4

MAIN EDD5116AFTA-5B-E
SUB K4H511638D-UCCC-

A



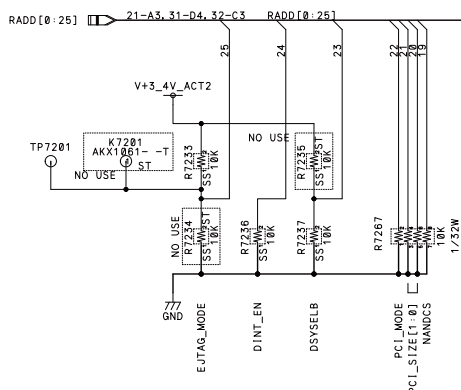
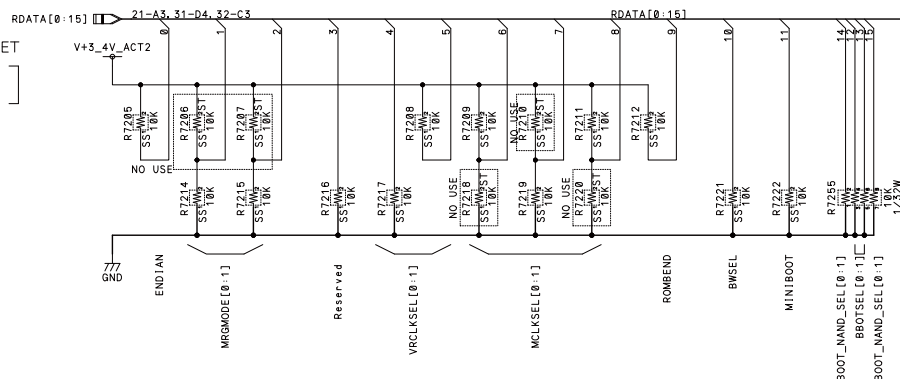
C

D

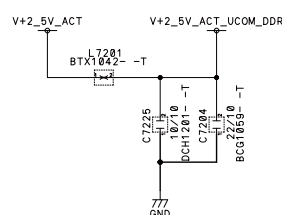
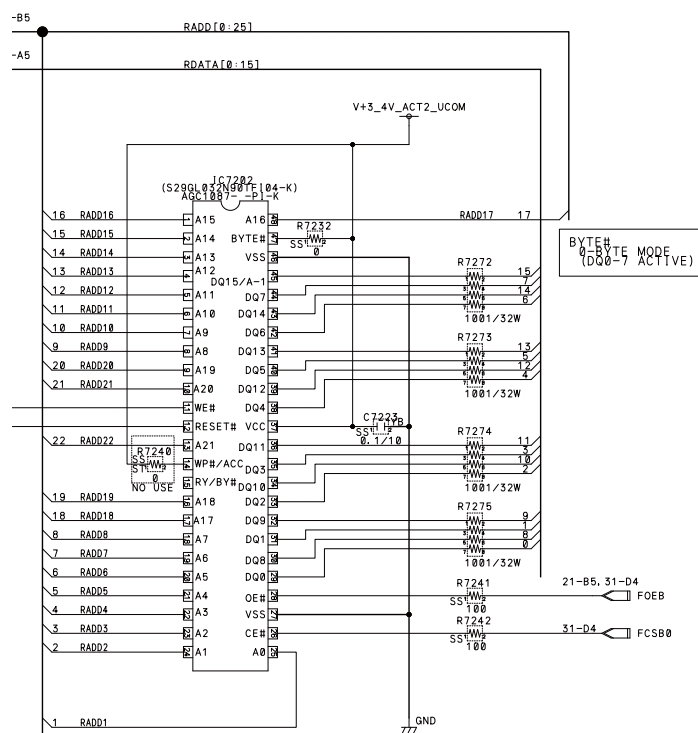
E

F

16AFTA-5B-E-K
1638D-UCCC-K



EMMA2 FLASH 32Mb i t



MODEL		
ITEM	USED	VACANT
R	7201-7238, 7240-7262, 7267-	7201, 7208, 7209, 7235, 7240
C	7201-7221, 7223, 7225, 7226	
Q		
IC	7201-7203	
F		
K	7201	7201
L	7201	
D		
X		

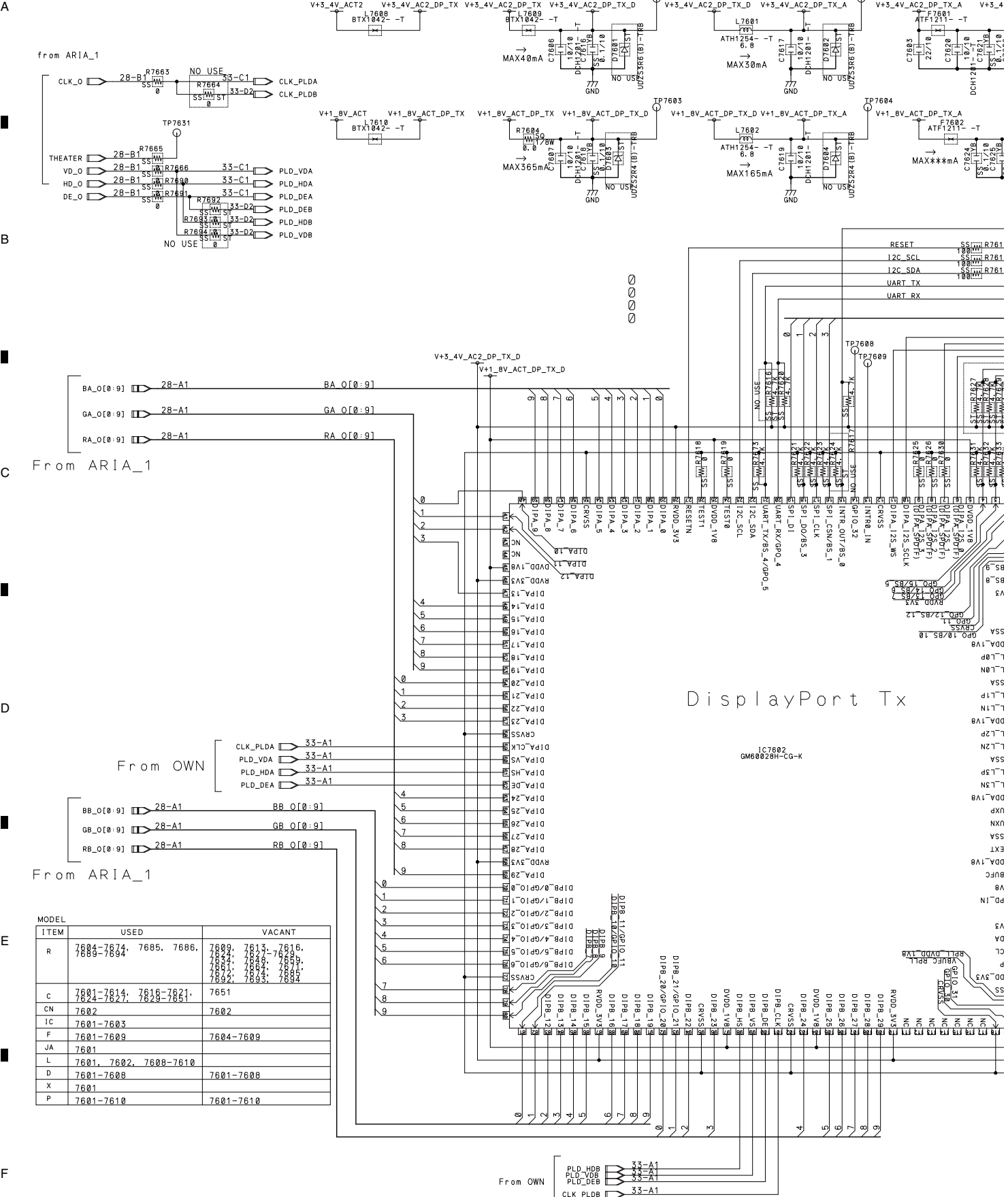
```

MAIN ASSY (MR_EU) (32/34)
EMMA2_MEM BLOCK

AWV2570- : AWW1413
AWV2569- : AWW1411
AWV2572- : AWW1411

```

10.34 MAIN BLOCK ASSY (33/33) [DP_TX BLOCK]






10.35 FRONT_HDM_USB ASSY

INPUT5

from/to MAIN Ass'y

USB CCONNECTOR

H1

The  mark found on some component should be replaced with same parts regulation authorized) of identical

A

B

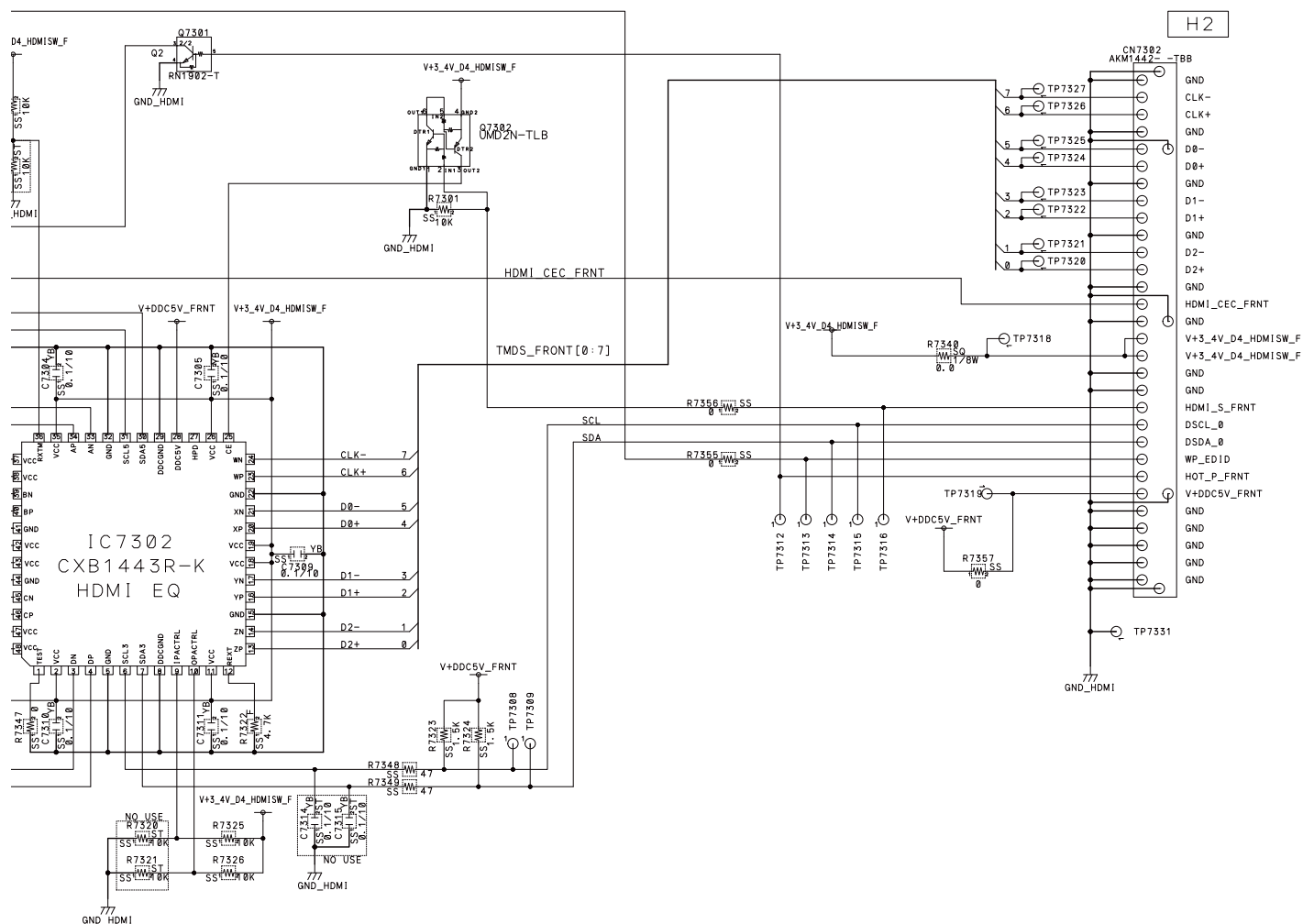
C

D

F

F

from/to	MAIN	Ass'y
---------	------	-------



MODEL		
ITEM	USED	VACANT
R	7301-7303, 7311-7314, 7320-7329, 7330, 7341-7349, 7350-7359	7314, 7320, 7321
C	7301, 7303-7311, 7314, 7315	7314, 7315
Q	7301, 7302	
IC	7301, 7302	
JA	7301, 7303	
CN	7302, 7304	
L	7301-7303	7303
D	7301	
P	7301-7312	7301-7312

x found on some component parts
replaced with same parts(safety
n authorized) of identical designation.

MAIN ASSY (MR_EU) (34/34)
FRONT_HDMI_USB ASS'Y

FRONT HDMI USB ASS'Y

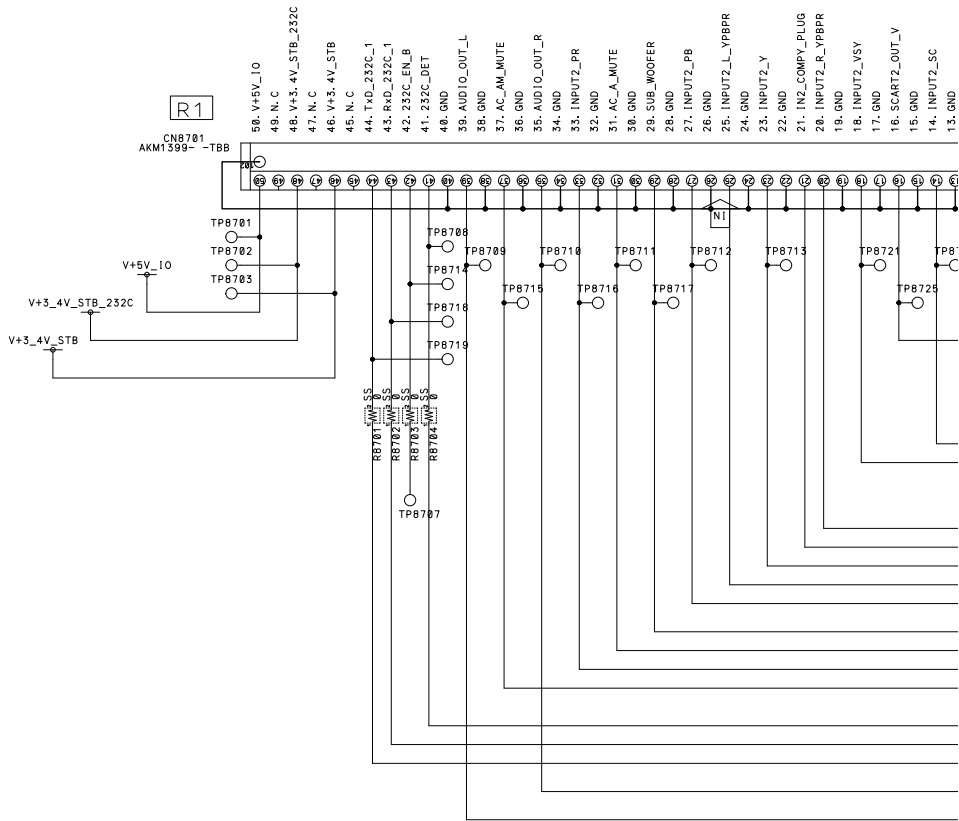
AWV2570- : AWW1412
AWV2569- : AWW1412
AWV2572- : AWW1412

AWV	2	5	7	8	-	:	AWW	4	1	2
AWV	2	5	6	9	-	:	AWW	1	4	2
AWV	2	5	7	2	-	:	AWW	1	4	2

AWV	2	5	7	8	-	:	AWW	4	1	2
AWV	2	5	6	9	-	:	AWW	1	4	2
AWV	2	5	7	2	-	:	AWW	1	4	2

10.36 REAR IO ASSY (1/3) [BOARD_IF BLOCK]


from/to MAIN ASS'Y



MODEL		
ITEM	USED	VACANT
R	8701-8704	
C		
Q		
IC		
F		
X		
L		
D		
CN	8701	

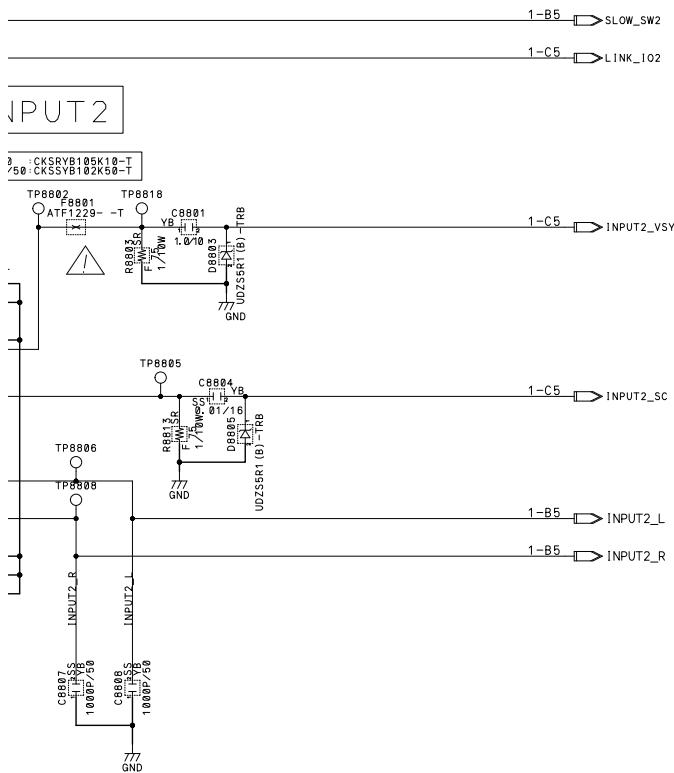
NOTES

RESISTORS

 SS RS1/16SS***J-T

* RESISTORS
Indicated in Ω, ±5%, 1/16W Toler
unless otherwise noted, k:kΩ, M:MΩ

△




to BOARD_IF

INPUT2

- | | |
|---------------------------|-------------------------------|
| 1. Audio R output | 11. Not used |
| 2. Audio R input | 12. Not used |
| 3. Audio L output | 13. Earth |
| 4. Common earth for audio | 14. Not used |
| 5. Earth | 15. Chroma S-Video input |
| 6. Audio L input | 16. Not used |
| 7. Not used | 17. Earth for video |
| 8. Audio-video control | 18. Earth |
| 9. Earth | 19. Video output |
| 10. AV link control | 20. Video input/S-Video input |
| | 21. Plug shield |

Connection pin assignments for SCART

The  mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

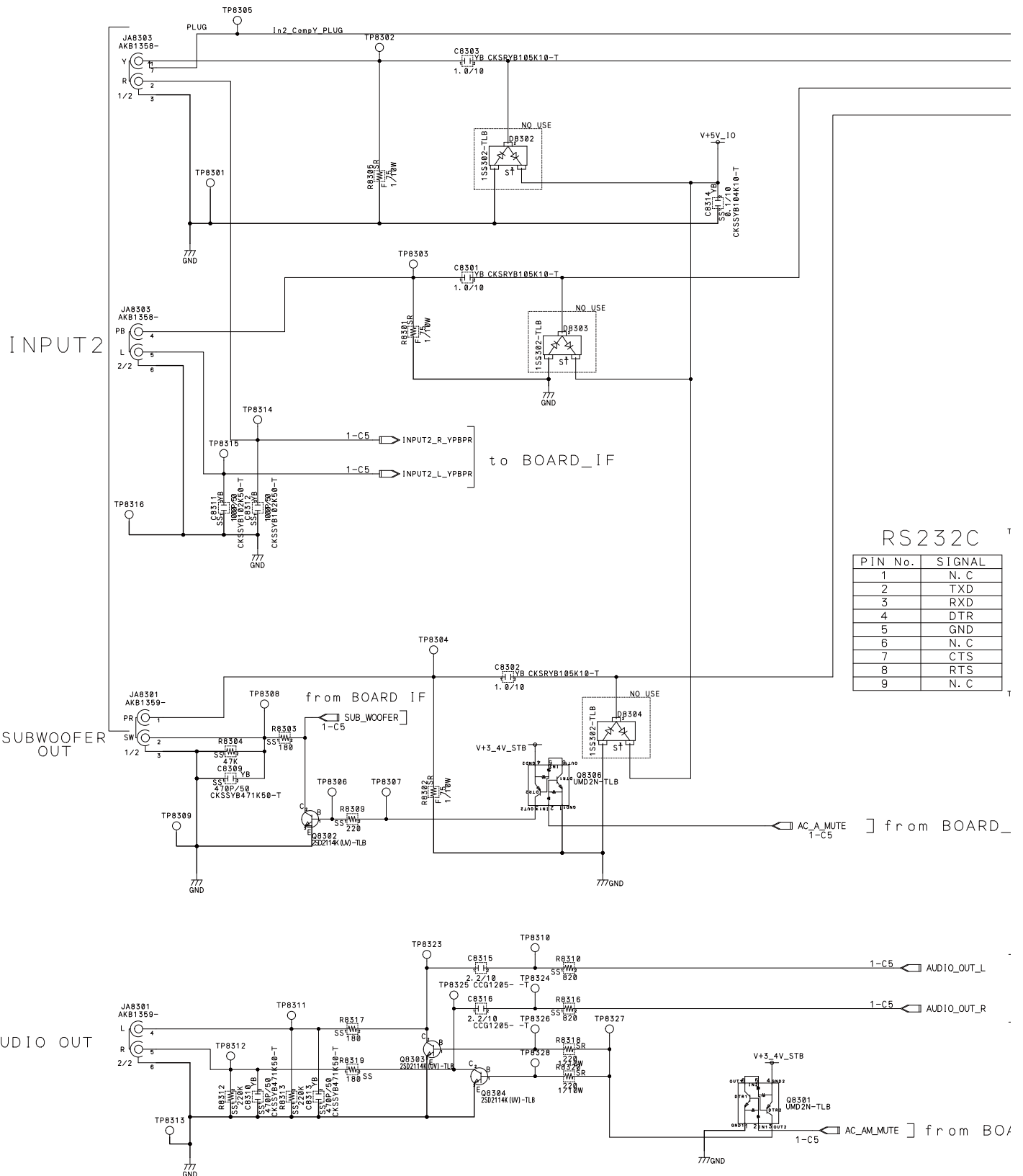
NOTES	
RESISTORS	CAPACITORS
RS1/8SQ***J-T	YB CKSRYB***K**~T
RS1/10SR***J-T	CH CCSSCH***J50-T
RS1/16SS***J-T	YB CKSSYB***K**~T

RESISTORS indicated in Ω , $\pm 5\%$, 1/16W Tolerance, unless otherwise noted, k: k Ω , M: M Ω .

CAPACITORS indicated in Capacity (uF)/Voltage (V), unless otherwise noted, p: pF, unless otherwise noted, voltage is 50V, except electrolytic capacitor.

EUKUGO ASS'Y (EU) (2/6)
REAR I/O ASS'Y
TO BLOCK
AWV2571-
AWV1241
A02W1441

10.38 REAR IO ASSY (3/3) [IO_1 BLOCK]



The
should
regulat

A

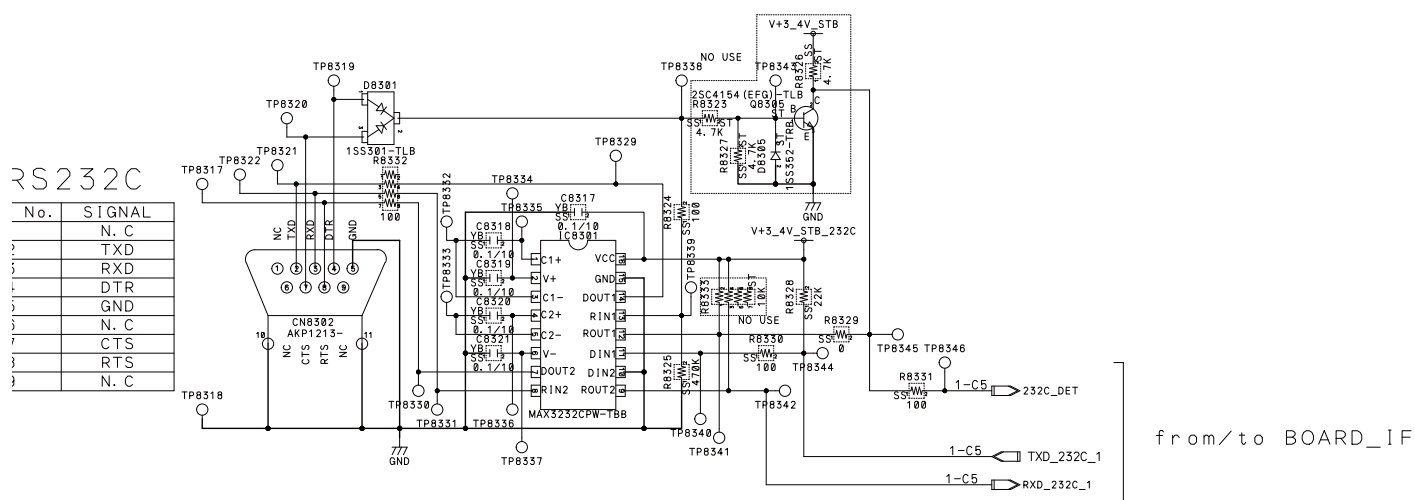
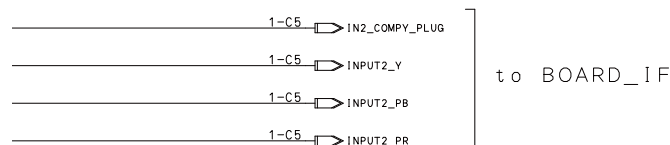
B

C

D

F

F



NOTES

```
from BOARD_IF
```



5 AUDIO_OUT_L

5 AUDIO_OUT_R


to BOARD IF

LE] from BOARD IF

RESISTORS

 SR RS1/10SR***J-T
 1/10W
 SS RS1/16SS***J-T

CAPACITORS


 CKSRYB***K**~T
 ss

```


* RESISTORS in  $\Omega$ ,  $\pm 5\%$ ,  $1/16W$ , Tolerance
u CAPACITORS in  $\mu F$ ,  $\pm 5\%$ ,  $1/16W$ , Tolerance
* Indicated other Capacitor type (P) / Voltage (V)
u Indicated other Capacitor type (P) / Voltage (V)
* Indicated other Capacitor type (P) / Voltage (V)
u Indicated other Capacitor type (P) / Voltage (V)

```

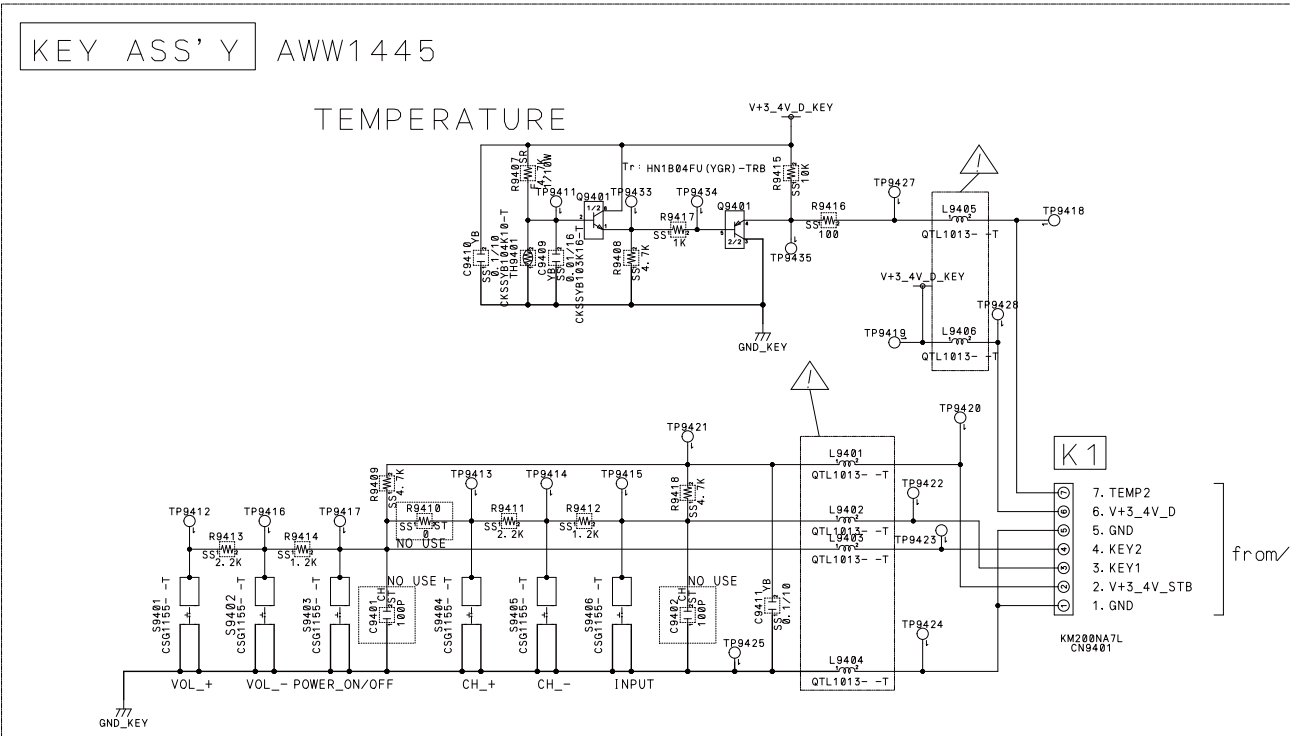
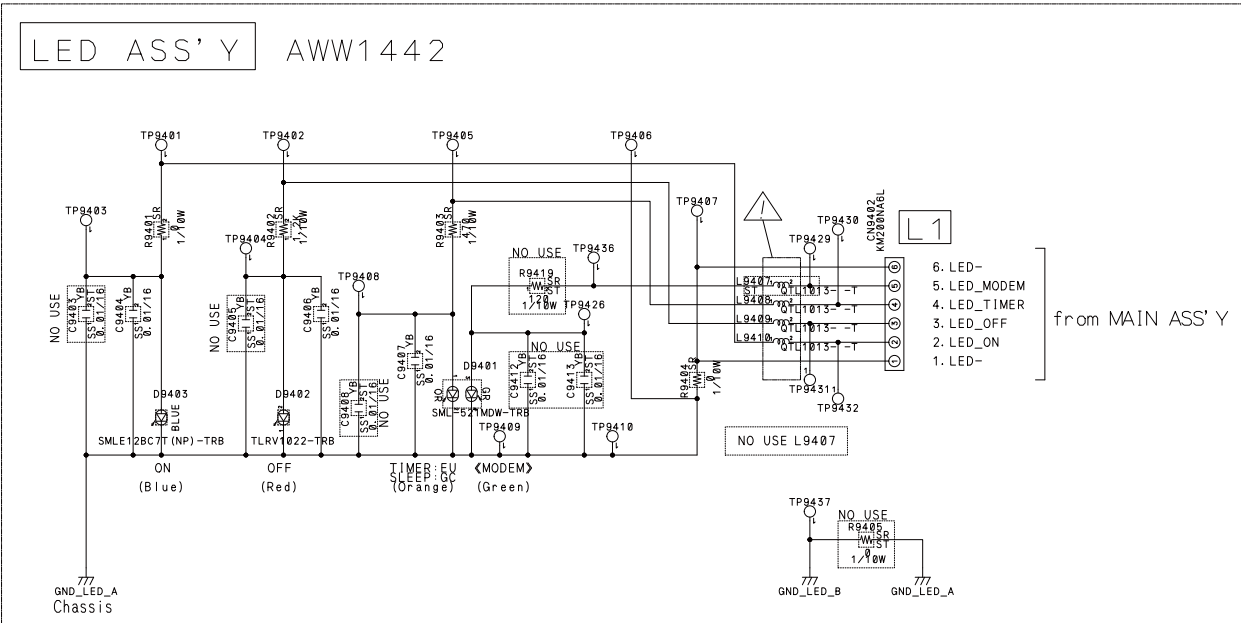
MODEL		
ITEM	USED	VACANT
R	8301-8305, 8308, 8310, 8312, 8313, 8316-8320, 8323-8333	8323, 8326, 8327, 8333
C	8301-8305, 8309-8321	
Q	8301-8306	8305
IC	8301	
F		
JA	8301, 8303	
L		
D	8301-8305	8302-8305
CN	8302	

FUKUGO ASS'Y (EU) (3/6)
 REAR TO ASS'Y
 TO_1-BLOCK

AWV2571-
AWV1441
A03W1441

The  mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

10.39 LED AND KEY ASSYS



MODEL	USED	VACANT
ITEM	9401-9405, 9407-9419	9406, 9410, 9411
R	9401-9413	9414-9419
C	9401-9413	9414-9419
Q	9401	
IC		
S	9401-9406	
TH	9401	
L	9401-9410	9407
D	9401-9403	
CN	9401, 9402	

RESISTORS	CAPACITORS
SR 1/10W SS	CH CCSRCH***J50-T
RS1/10SR***J-T	VB CKSSYB***K***-T
RS1/16SS***J-T	

* RESISTORS
Indicated in Ω , $\pm 5\%$, 1/16W Tolerance
Unless otherwise noted, k: k Ω , M: M Ω .
* CAPACITORS
Indicated in Capacity (F) / Voltage (V)
Unless otherwise noted, p: pF
Indication without voltage is 50V
except electrolytic capacitor.

The Δ mark
should be re-
regulation a



A



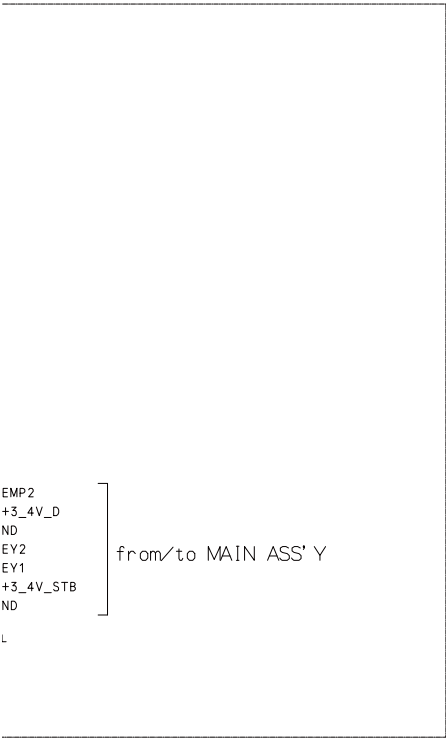
B




C



D



E

The  mark found on some component parts should be replaced with same parts(safety regulation authorized) of identical designation.



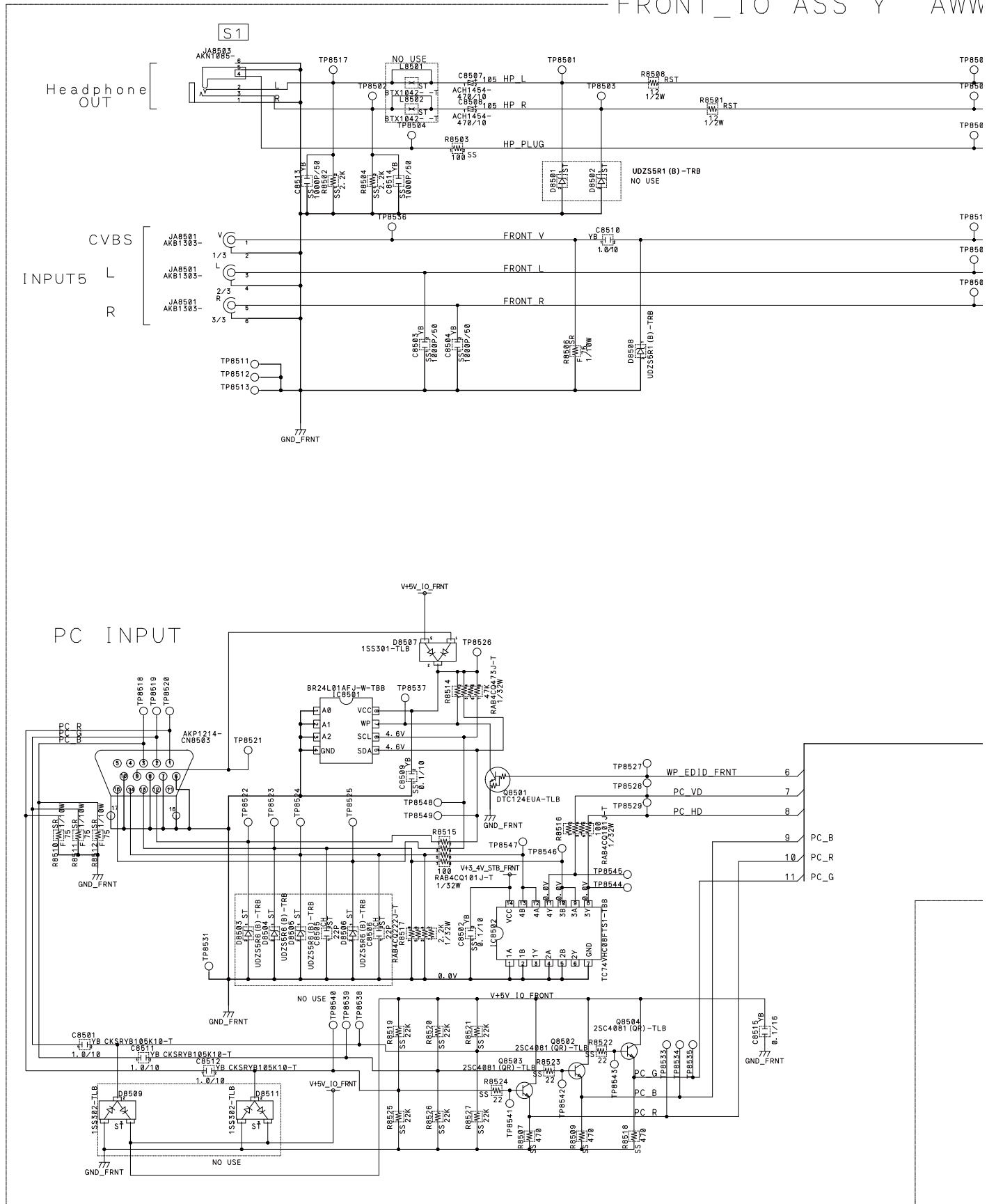
F

FUKUGO ASS'Y (EU/GC) (4/6)
REV ASS'Y
AWV2571-
AWV1442
AWV1446

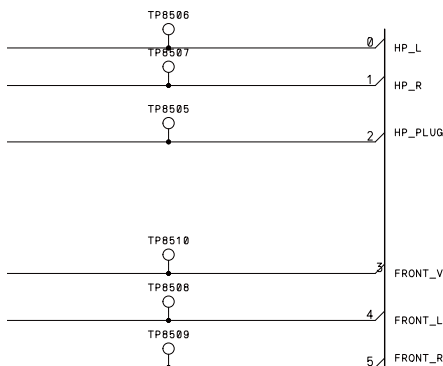


10.40 FRONT IO ASSY

FRONT_IO ASS'Y AWW

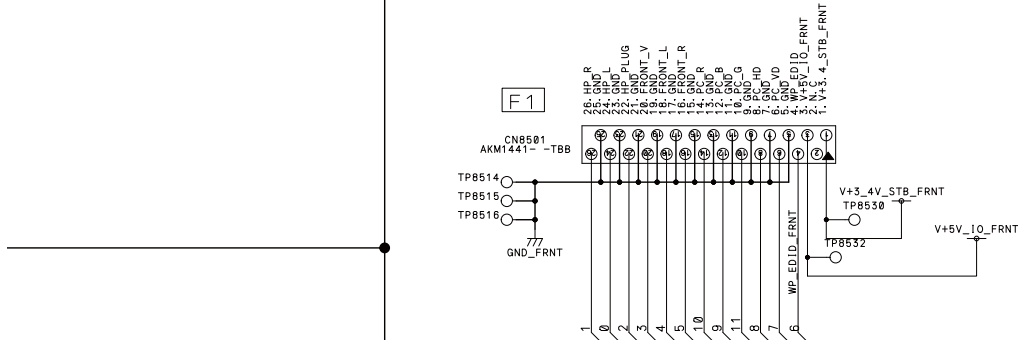


Y AWW1443



FRONT_AV[0:11]

from/to MAIN ASS'Y



MODEL

ITEM	USED	VACANT
R	8501-8504, 8506-8512, 8514-8527	
C	8501-8515	8505, 8506, 8509
Q	8501-8504	
IC	8501, 8502	
F		
JA	8501, 8503	
L	8501, 8502	8501, 8502
D	8501-8509, 8511	8501-8506, 8509, 8511
CN	8501, 8503	

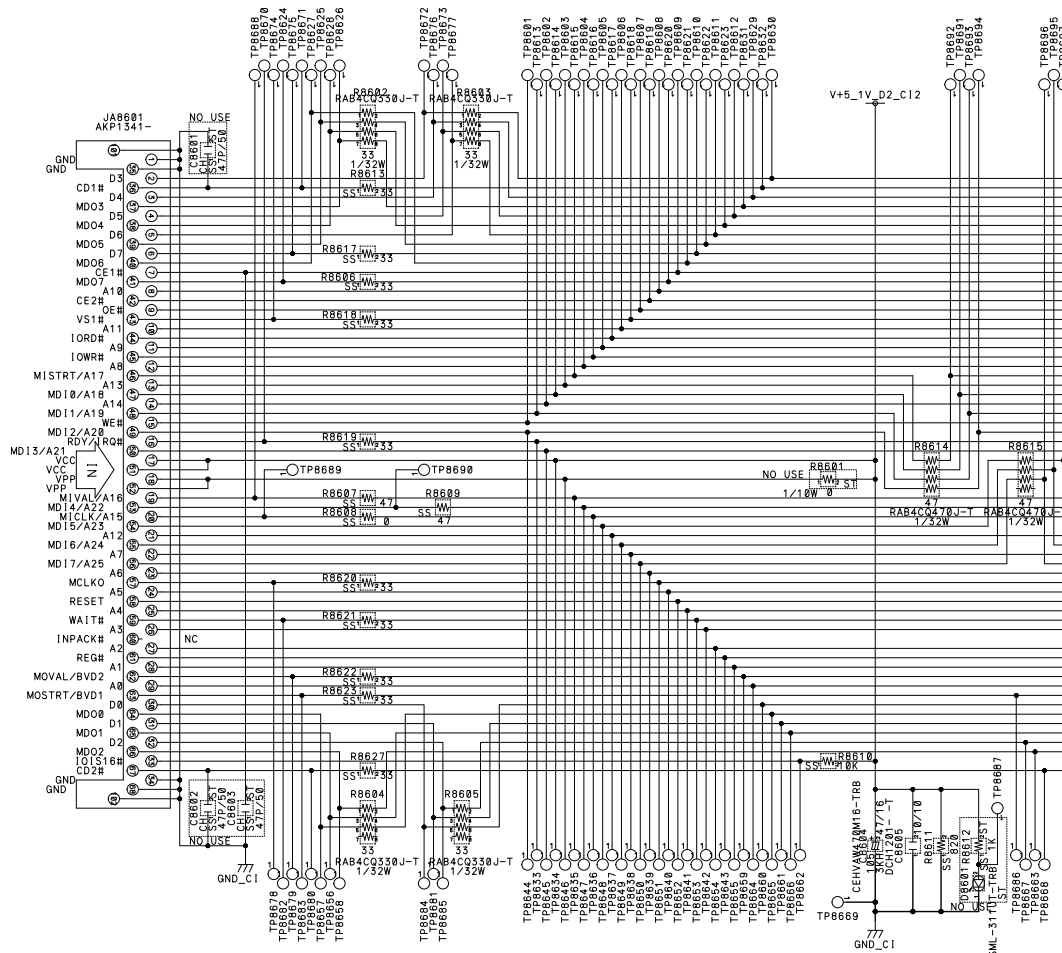
FUKUGO ASS'Y (EU) (5/6)
FRONT_IO ASS'Y

AWV2571-
AWW1443

10.41 CI CARD ASSY

CI CARD ASS'Y AWW1444

COMMON INTERFACE2
(SATELLITE)



NOTES

RESISTORS



RS1/10S***J-T



RS1/16SS***J-T

CAPACITORS

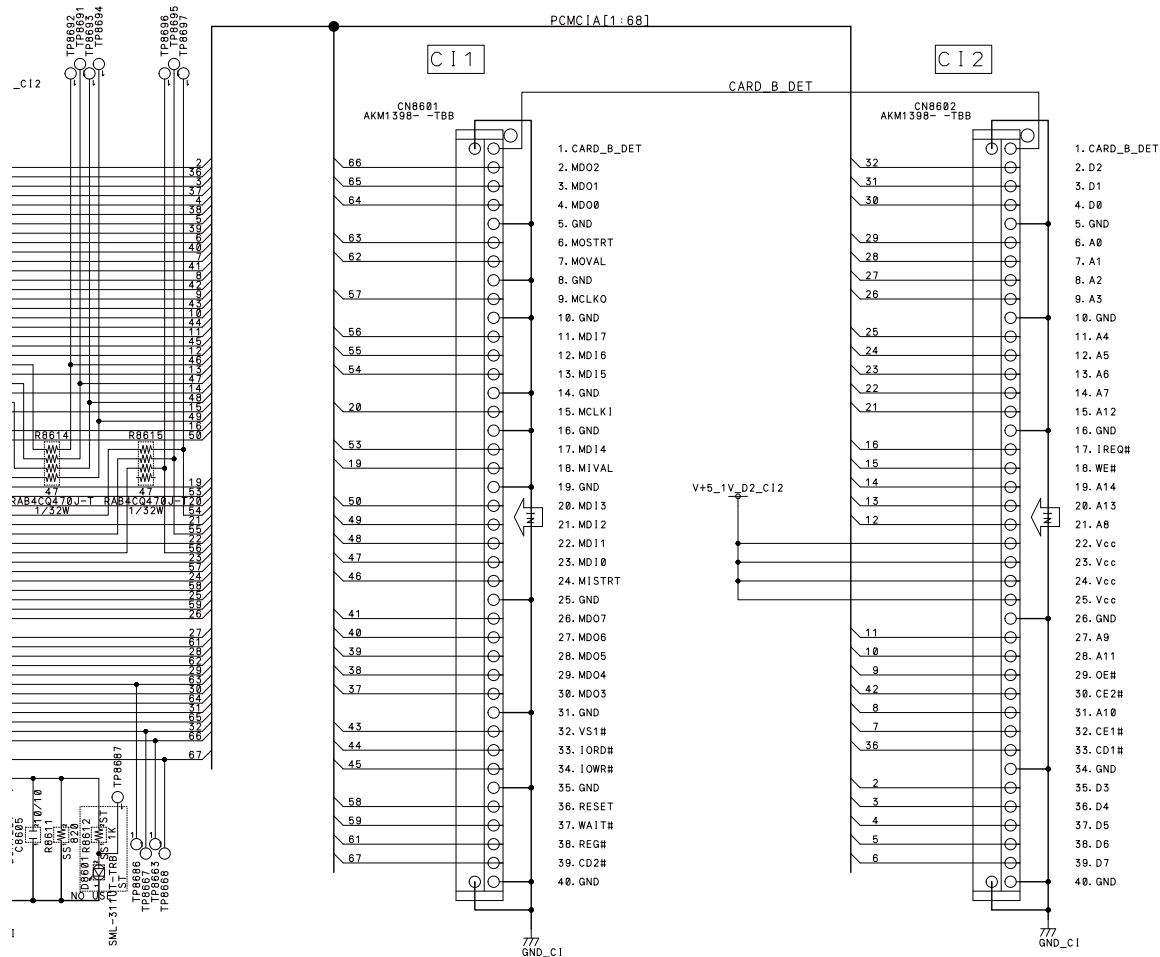


CCSSCH***J50-T

* RESISTORS
Indicated in Ω, ±5%, 1/16W Tolerance
unless otherwise noted, k:kΩ, M:MΩ.
* CAPACITORS
Indicated in Capacity (μF) / Voltage (V)
unless otherwise noted, p:pF
Indication without Voltage is 50V
except electrolytic capacitor.

MODEL

ITEM	USED
R	8601-8615, 8617-8623, 8627
Q	8601-8605
IC	
F	
JA	8601
L	
D	8601
CN	8601, 8602



from/to MAIN ASS'Y

USED	VACANT
8615, 8617-8623, 8627	8601, 8612
8605	8601-8603
	8601
8602	

FUKURO BLOCK (EU) (6/6)

AWW1341-

10.42 VOLTAGES AND WAVEFORMS

[1]VOLTAGES

A

B

C

D

E

F

MAIN_BLOCK_Assy

REAR_IO_Assy

M11 CN4002 (AKM1399- -TBB)		Voltage (V)	R1 CN8701 (AKM1399- -TBB)	
NO.	Name		Name	NO.
1	V+5V_IO	5.0	V+5V_IO	50
2	N.C.	0	N.C.	49
3	V+3_4V_STB_232C	3.4	V+3_4V_STB_232C	48
4	N.C.	0	N.C.	47
5	V+3_4V_STB	3.4	V+3_4V_STB	46
6	N.C.	0	N.C.	45
7	TXD_232C_1	3.4	TXD_232C_1	44
8	RXD_232C_1	3.4	RXD_232C_1	43
9	232C_EN_B	0	232C_EN_B	42
10	232C_DET	0/3.4	232C_DET	41
11	GND	0	GND	40
12	AUDIO_OUT_L	5.9	AUDIO_OUT_L	39
13	GND	0	GND	38
14	AC_AM_MUTE	0	AC_AM_MUTE	37
15	GND	0	GND	36
16	AUDIO_OUT_R	5.9	AUDIO_OUT_R	35
17	GND	0	GND	34
18	INPUT2_PR	2.4	INPUT2_PR	33
19	GND	0	GND	32
20	AC_A_MUTE	0	AC_A_MUTE	31
21	GND	0	GND	30
22	SUB_WOOFER	0	SUB_WOOFER	29
23	GND	0	GND	28
24	INPUT2_PB	2.4	INPUT2_PB	27
25	GND	0	GND	26
26	IN2_YPbPr_L	0	INPUT2_YPBPR_L	25
27	GND	0	GND	24
28	INPUT2_Y	2.4	INPUT2_Y	23
29	GND	0	GND	22
30	IN2_COMPY_PLUG	4.9	IN2_COMPY_PLUG	21
31	IN2_YPbPr_R	0	INPUT2_YPBPR_R	20
32	GND	0	GND	19
33	INPUT2_VSY	2.6	INPUT2_VSY	18
34	GND	0	GND	17
35	SCART2_OUT_V	5.1	SCART2_OUT_V	16
36	GND	0	GND	15
37	INPUT2_SC	2.2	INPUT2_SC	14
38	GND	0	GND	13
39	LINK_IO2	4.7	LINK_IO2	12
40	SLOW_SW2	0	SLOW_SW2	11
41	GND	0	GND	10
42	INPUT2_L	0	INPUT2_L	9
43	GND	0	GND	8
44	INPUT2_R	0	INPUT2_R	7
45	GND	0	GND	6
46	SCART_OUT_L	5.9	SCART_OUT_L	5
47	GND	0	GND	4
48	SC2_MUTE	2.9	AC_SC2_MUTE	3
49	GND	0	GND	2
50	SCART_OUT_R	5.9	SCART_OUT_R	1

MAIN_BLOCK_Assy

FRONT_IO_Assy

M12 CN4003 (AKM1441- -TBB)		Voltage (V)	F1 CN8501 (AKM1441- -TBB)	
NO.	Name		Name	NO.
1	HP_R	2.1	HP_R	26
2	GND	0	GND	25
3	HP_L	2.1	HP_L	24
4	GND	0	GND	23
5	HP_PLUG	0/3.1	HP_PLUG	22
6	GND	0	GND	21
7	FRONT_V	2.5	FRONT_V	20
8	GND	0	GND	19
9	FRONT_L	-0.2 / 0.2	FRONT_L	18
10	GND	0	GND	17
11	FRONT_R	-0.2 / 0.2	FRONT_R	16
12	GND	0	GND	15
13	PC_R	1.8	PC_R	14
14	GND	0	GND	13
15	PC_B	1.8	PC_B	12
16	GND	0	GND	11
17	PC_G	1.8	PC_G	10
18	GND	0	GND	9
19	PC_HD	0/3.4	PC_HD	8
20	GND	0	GND	7
21	PC_VD	0/3.4	PC_VD	6
22	GND	0	GND	5
23	WP_EDID	0	WP_EDID	4
24	V+5V_IO_FRONT	5.0	V+5V_IO_FRONT	3
25	N.C	0	N.C	2
26	V+3_4V_STB_FRONT	3.4	V+3_4V_STB_FRONT	1

MAIN_BLOCK_Assy

CARD_Assy

M21 CN4101 (AKM1398- -TBB)		Voltage (V)	C11 CN8601 (AKM1398- -TBB)	
NO.	Name		Name	NO.
1	CARD_B_DET	0	CARD_B_DET	1
2	MDOB2	0.1	MDO2	2
3	MDOB1	0.1	MDO1	3
4	MDOB0	0.1	MDO0	4
5	GND	0	GND	5
6	MOSTRTB	0.1	MOSTRT	6
7	MOVALB	0.1	MOVAL	7
8	GND	0	GND	8
9	MCLK0B	0.1	MCLK0	9
10	GND	0	GND	10
11	MDIB7	1.6	MDI7	11
12	MDIB6	1.6	MDI6	12
13	MDIB5	1.6	MDI5	13
14	GND	0	GND	14
15	MCLKIB	1.6	MCLKI	15
16	GND	0	GND	16
17	MDIBI4	1.6	MDI4	17
18	MIVALB	1.6	MIVAL	18
19	GND	0	GND	19
20	MDIB3	1.6	MDI3	20
21	MDIB2	1.6	MDI2	21
22	MDIBI1	1.6	MDI1	22
23	MDIBI0	1.6	MDI0	23
24	MISTRTB	1.6	MISTRT	24
25	GND	0	GND	25
26	MDOB7	0	MDO7	26
27	MDOB6	0	MDO6	27
28	MDOB5	0	MDO5	28
29	MDOB4	0	MDO4	29
30	MDOB3	0	MDO3	30
31	GND	0	GND	31
32	VS1#_B	2.8	VS1#	32
33	IORD#_B	1.6	IORD#	33
34	IOWR#_B	1.6	IOWR#	34
35	GND	0	GND	35
36	RESETB	1.6	RESET	36
37	WAITB#	0	WAIT#	37
38	REG#_B	1.6	REG#	38
39	CD2B#	5.0	CD2#	39
40	GND	0	GND	40

MAIN_BLOCK_Assy

CARD_Assy

M22 CN4102 (AKM1398- -TBB)		Voltage (V)	C12 CN8602 (AKM1398- -TBB)	
NO.	Name		Name	NO.
1	CARD_B_DET	0	CARD_B_DET	1
2	D2	0	D2	2
3	D1	0	D1	3
4	D0	0	D0	4
5	GND	0	GND	5
6	A0	1.6	A0	6
7	A1	1.6	A1	7
8	A2	1.6	A2	8
9	A3	1.6	A3	9
10	GND	0	GND	10
11	A4	1.6	A4	11
12	A5	1.6	A5	12
13	A6	1.6	A6	13
14	A7	1.6	A7	14
15	A12	1.6	A12	15
16	GND	0	GND	16
17	IREQB#	0	IREQ#	17
18	WE#_B	1.6	WE#	18
19	A14	1.6	A14	19
20	A13	1.6	A13	20
21	A8	1.6	A8	21
22	Vcc	0	Vcc	22
23	Vcc	0	Vcc	23
24	Vcc	0	Vcc	24
25	Vcc	0	Vcc	25
26	GND	0	GND	26
27	A9	1.6	A9	27
28	A11	1.6	A11	28
29	OE#_B	1.6	OE#	29
30	CE2B#	1.6	CE2#	30
31	A10	1.6	A10	31
32	CE1B#	1.6	CE1#	32
33	CD1B#	5.0	CD1#	33
34	GND	0	GND	34
35	D3	0	D3	35
36	D4	0	D4	36
37	D5	0	D5	37
38	D6	0	D6	38
39	D7	0	D7	39
40	GND	0	GND	40

A

MAIN_BLOCK_Assy

FRONT_HDMI_Assy

M13 CN4901 (AKM1442- -TBB)		Voltage (V)	H1 CN7302 (AKM1442- -TBB)	
NO.	Name		Name	NO.
1	GND	0	GND	30
2	CLK-	1.6/3.0	CLK-	29
3	CLK+	1.6/3.0	CLK+	28
4	GND	0	GND	27
5	D0-	3.3/3.0	D0-	26
6	D0+	3.3/3.0	D0+	25
7	GND	0	GND	24
8	D1-	1.6/3.0	D1-	23
9	D1+	1.6/3.0	D1+	22
10	GND	0	GND	21
11	D2-	1.6/3.0	D2-	20
12	D2+	1.6/3.0	D2+	19
13	GND	0	GND	18
14	HDMI_CEC_FRNT	3.3	HDMI_CEC_FRNT	17
15	GND	0	GND	16
16	V+3_4V_D4_HDMISW_F	3.3	V+3_4V_D4_HDMISW_F	15
17	V+3_4V_D4_HDMISW_F	3.3	V+3_4V_D4_HDMISW_F	14
18	GND	0	GND	13
19	GND	0	GND	12
20	HDMI_S_FRNT	0/3.3	HDMI_S_FRNT	11
21	DSCL_0	0/5.0	DSCL_0	10
22	DSDA_0	0/5.0	DSDA_0	9
23	WP_EDID	0	WP_EDID	8
24	HOT_P_FRNT	0/3.3	HOT_P_FRNT	7
25	V+DDC5V_FRNT	0/5.0	V+DDC5V_FRNT	6
26	GND	0	GND	5
27	GND	0	GND	4
28	GND	0	GND	3
29	GND	0	GND	2
30	GND	0	GND	1

MAIN_BLOCK_Assy

F-HDMI_Assy(for USB)

M13 CN4004 (AKM1276- -TBB)		Voltage (V)	CN7304 (AKM1291- -TBB)	
NO.	Name		Name	NO.
1	SHIELD	0	SHIELD	1
2	GND	0	GND	2
3	D+	0	D+	3
4	D-	0	D-	4
5	VBUS	5.1	VBUS	5

B

C

D

E

F

MAIN_BLOCK_Assy

KEY_Assy

M2 CN4204 (AKW1343- -TBB)		Voltage (V)	K1 CN9401 (KM200NA7L)	
NO.	Name		Name	NO.
1	OPEN	0		
2	OPEN	0		
3	TEMP2	2.1	TEMP2	7
4	GND	0	GND	5
5	KEY1	3.4	KEY1	3
6	GND	0	GND	1
7	LED-	0		
8	LED_TIMER	3.3/0		
9	LED_ON	2.8/0		
10	OPEN	0		
11	OPEN	0		
12	LED-	0		
13	LED_OFF	3.3/0		
14	LED_MODEM(LED-)	0		
15	OPEN	0		
16	V+3_4V_STB	3.4	V+3_4V_STB	2
17	KEY2	3.4	KEY2	4
18	V+3_4V_D	3.3	V+3_4V_D_KEY	6
19	OPEN	0		
20	OPEN	0		

MAIN_BLOCK_Assy

LED_Assy

M2 CN4204 (AKW1343- -TBB)		Voltage (V)	L1 CN9402 (KM200NA6L)	
NO.	Name		Name	NO.
1	OPEN	0		
2	OPEN	0		
3	TEMP2	2.1		
4	GND	0		
5	KEY1	3.4		
6	GND	0		
7	LED-	0	LED-	6
8	LED_TIMER	3.3/0	LED_TIMER	4
9	LED_ON	2.8/0	LED_ON	2
10	OPEN	0		
11	OPEN	0		
12	LED-	0	LED-	1
13	LED_OFF	3.3/0	LED_OFF	3
14	LED_MODEM(LED-)	0	LED_MODEM	5
15	OPEN	0		
16	V+3_4V_STB	3.4		
17	KEY2	3.4		
18	V+3_4V_D	3.3		
19	OPEN	0		
20	OPEN	0		

MAIN_BLOCK_Assy**FAN**

M31 CN4201 (AKM1276- -TBB)		Voltage (V)		
NO.	Name		Name	NO.
1	N.C.	0		
2	FAN_VCC2	7.0/8.9	VCC	
3	FAN_NEG2	0.1	NG	
4	GND	0	GND	
5	N.C.	0		

MAIN_BLOCK_Assy**POWER_SUPPLY**

M1 CN4203 (AKM1440-)		Voltage (V)	P2 (B26B-PNDZ-1)		Voltage (V)
NO.	Name		Name	NO.	
1	V+17V	19.1	V+5_1V_STB	26	4.9
2	V+5_1V_STB	4.9	V+17V	25	19.1
3	GND	0	GND	24	0
4	GND	0	GND	23	0
5	V+12V	13.0	V+12V	22	13.0
6	V+12V	13.0	V+12V	21	13.0
7	GND	0	GND	20	0
8	GND	0	GND	19	0
9	V+6_5V	6.6	V+6_5V	18	6.6
10	V+6_5V	6.6	V+6_5V	17	6.6
11	V+6_5V	6.6	V+6_5V	16	6.6
12	V+6_5V	6.6	V+6_5V	15	6.6
13	GND	0	GND	14	0
14	GND	0	GND	13	0
15	GND	0	GND	12	0
16	GND	0	GND	11	0
17	V+3_4V_STB	3.4	V+3_4V_STB	10	3.4
18	V+3_4V_STB	3.4	V+3_4V_STB	9	3.4
19	V+3_4V_STB	3.4	V+3_4V_STB	8	3.4
20	V+3_4V_STB	3.4	V+3_4V_STB	7	3.4
21	GND	0	V+3_4V_STB	6	3.4
22	V+3_4V_STB	3.4	GND	5	0
23	PD_TRG	0	GND	4	0
24	GND	0	PD_TRG	3	0
25	AC_DET	3.1	RELAY	2	3.1
26	RELAY	3.2	AC_DET	1	3.2

[2]WAVEFORMS

Refer to the section "5.2 DIAGNOSIS FLOWCHART OF FAILURE ANALYSIS" of the Service Manual for KRP-M01 (ARP3508) .

△

4

SIDE A

A

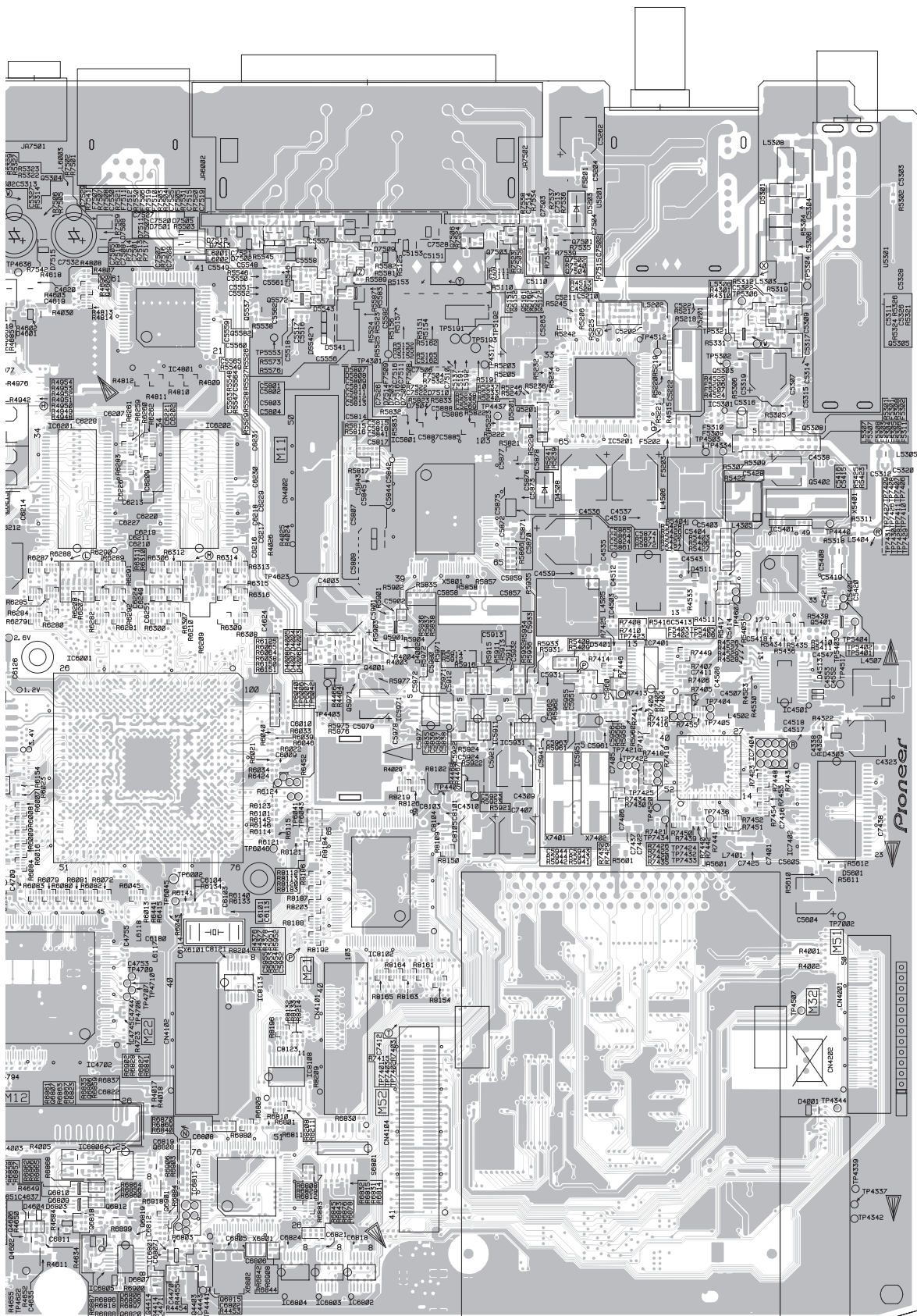
B

C

D

E

F



(ANP225-B)

KRP-M01

SIDE B

A

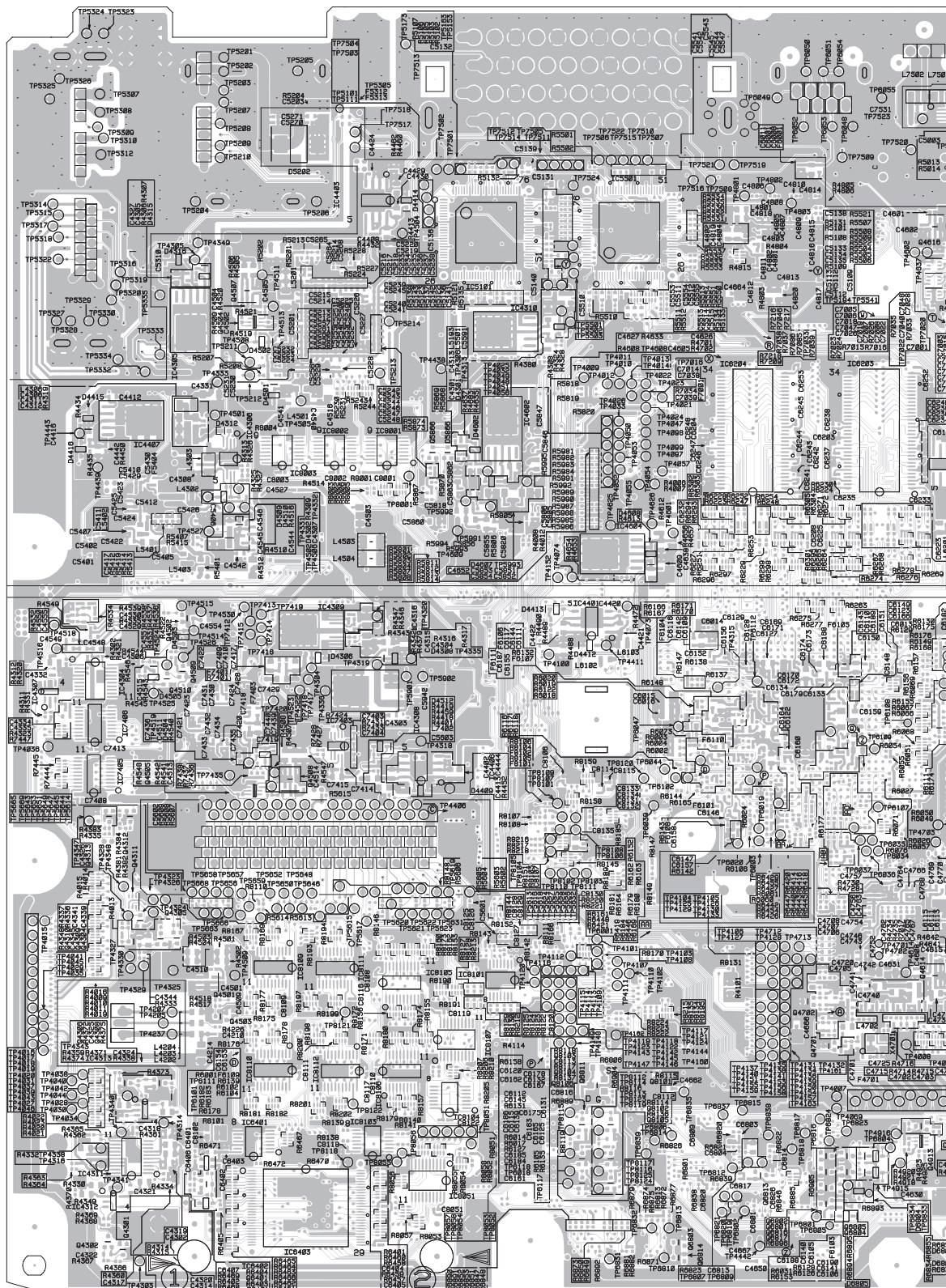
B

C

D

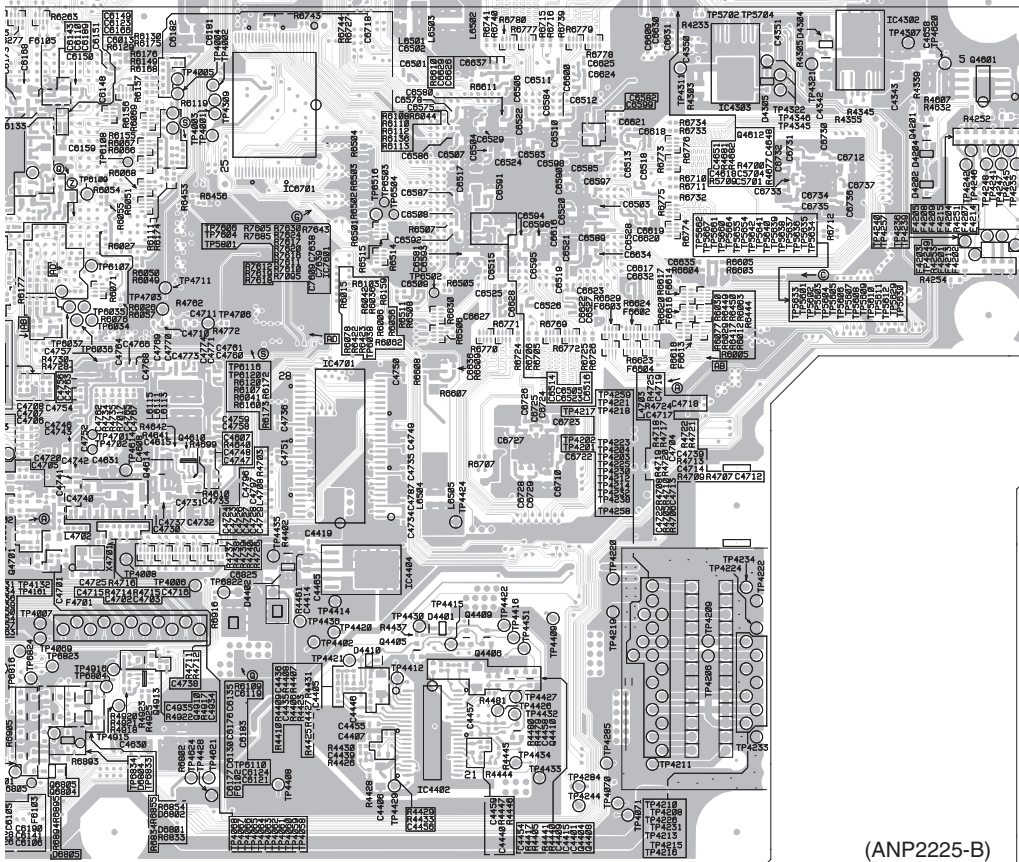
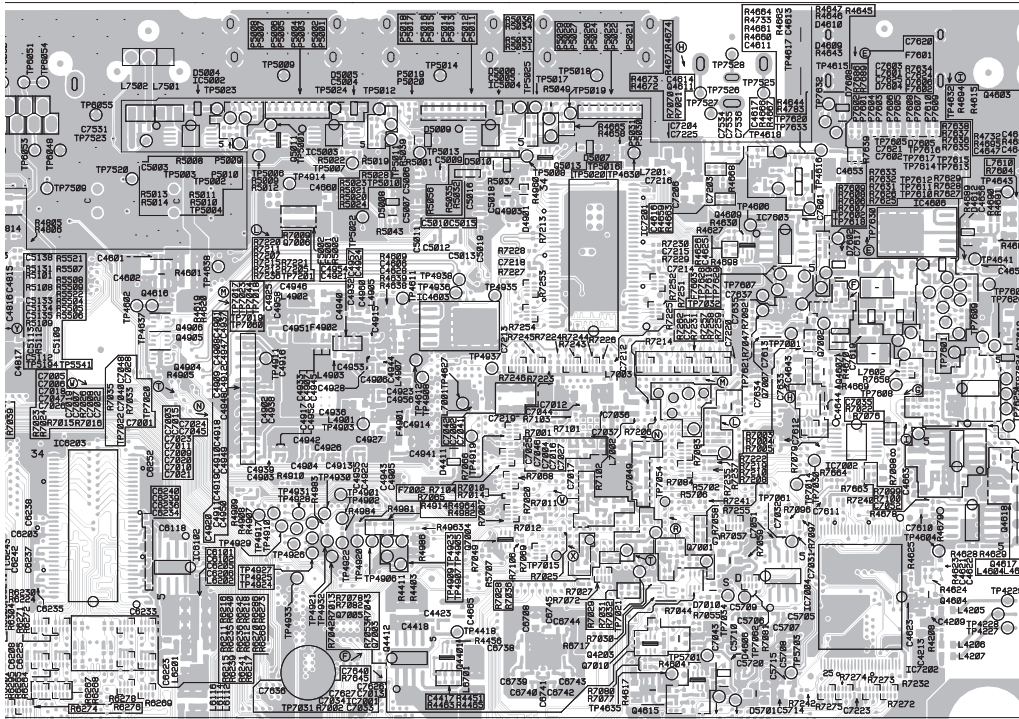
E

F

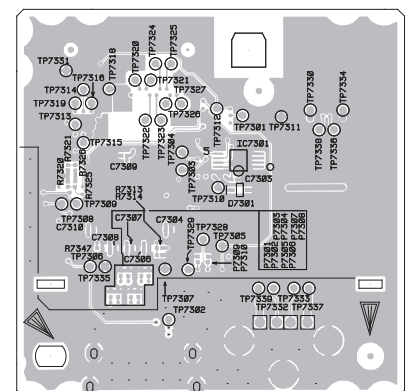


SIDE B

MAIN BLOCK ASSY



FRONT_HDM_USB ASSY



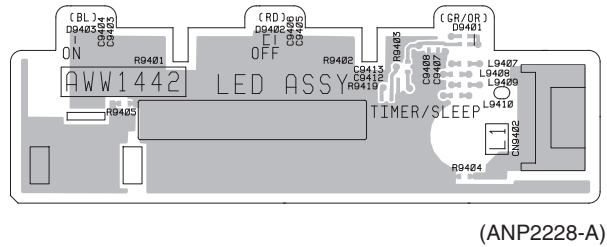
(ANP2225-B)

KRP-M01

11.2 REAR IO, LED, FRONT IO, CI CARD AND KEY ASSYS

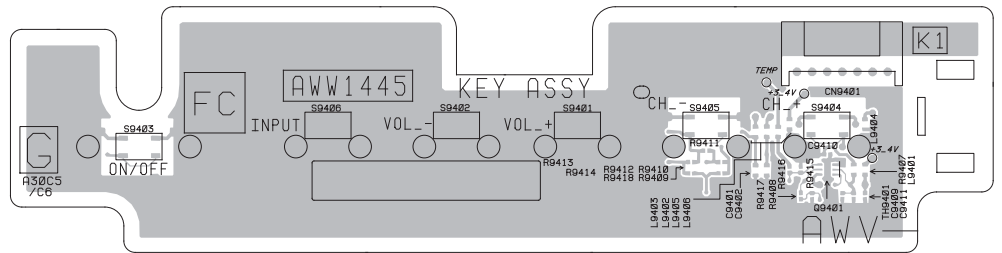
SIDE A

LED ASSY



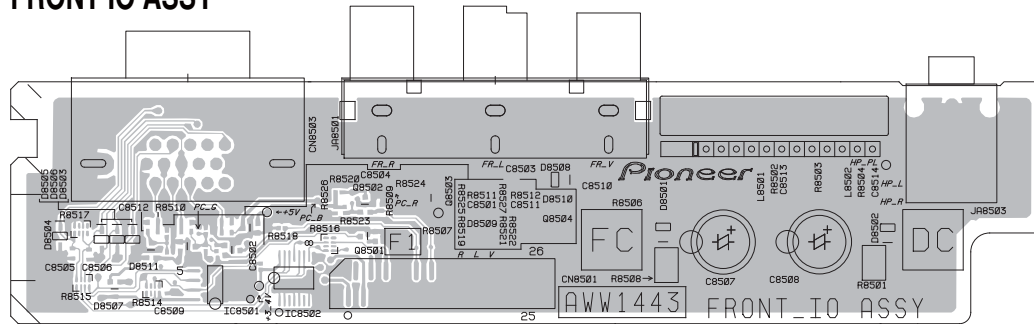
(ANP2228-A)

KEY ASSY



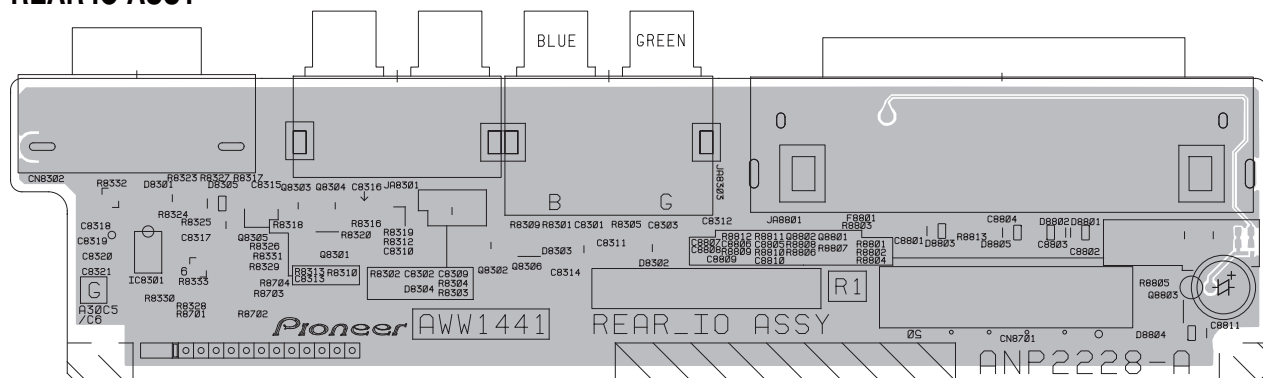
(ANP2228-A)

FRONT IO ASSY



(ANP2228-A)

REAR IO ASSY

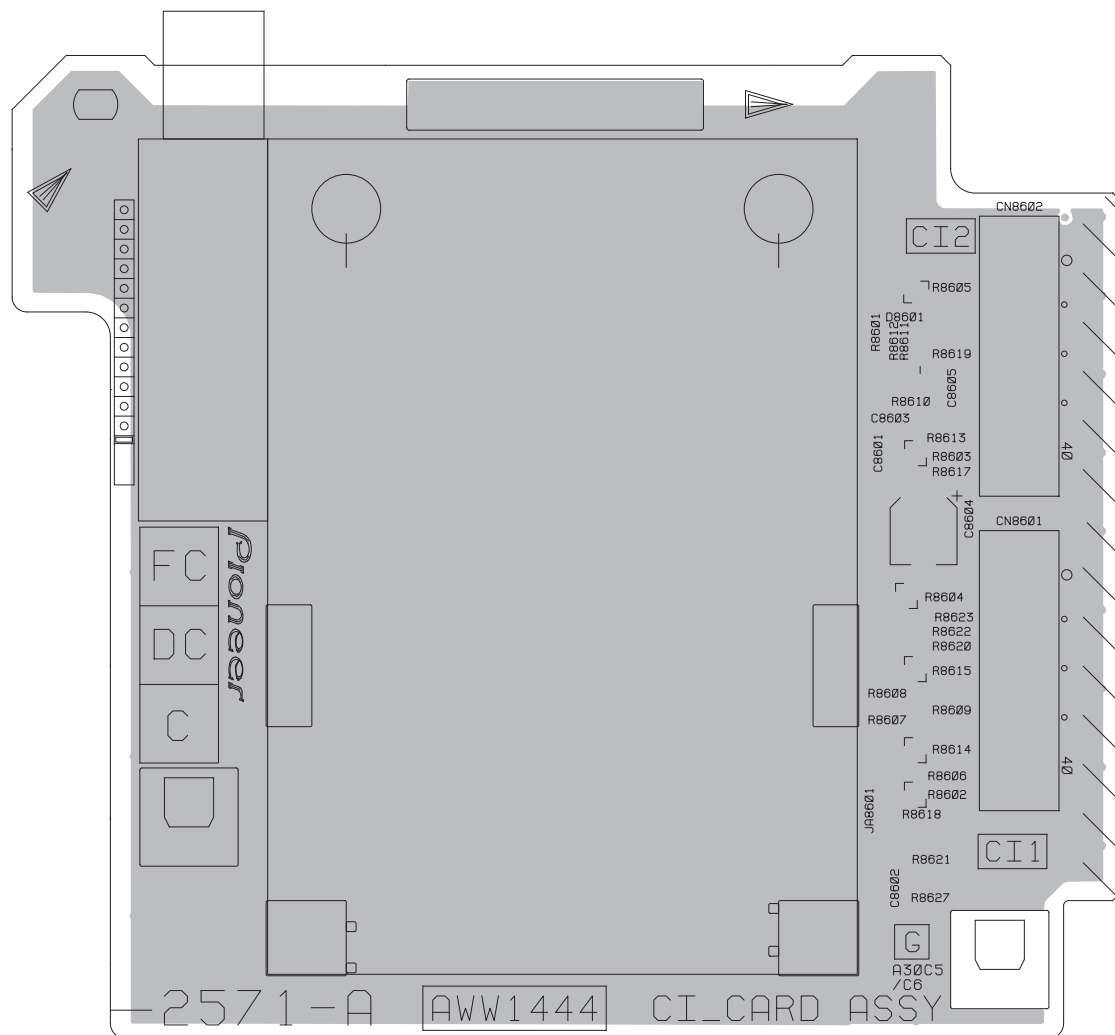


SIDE A

A

CI CARD ASSY

B



(ANP2228-A)

C

D

E

F



3-A)

SIDE B

A

B

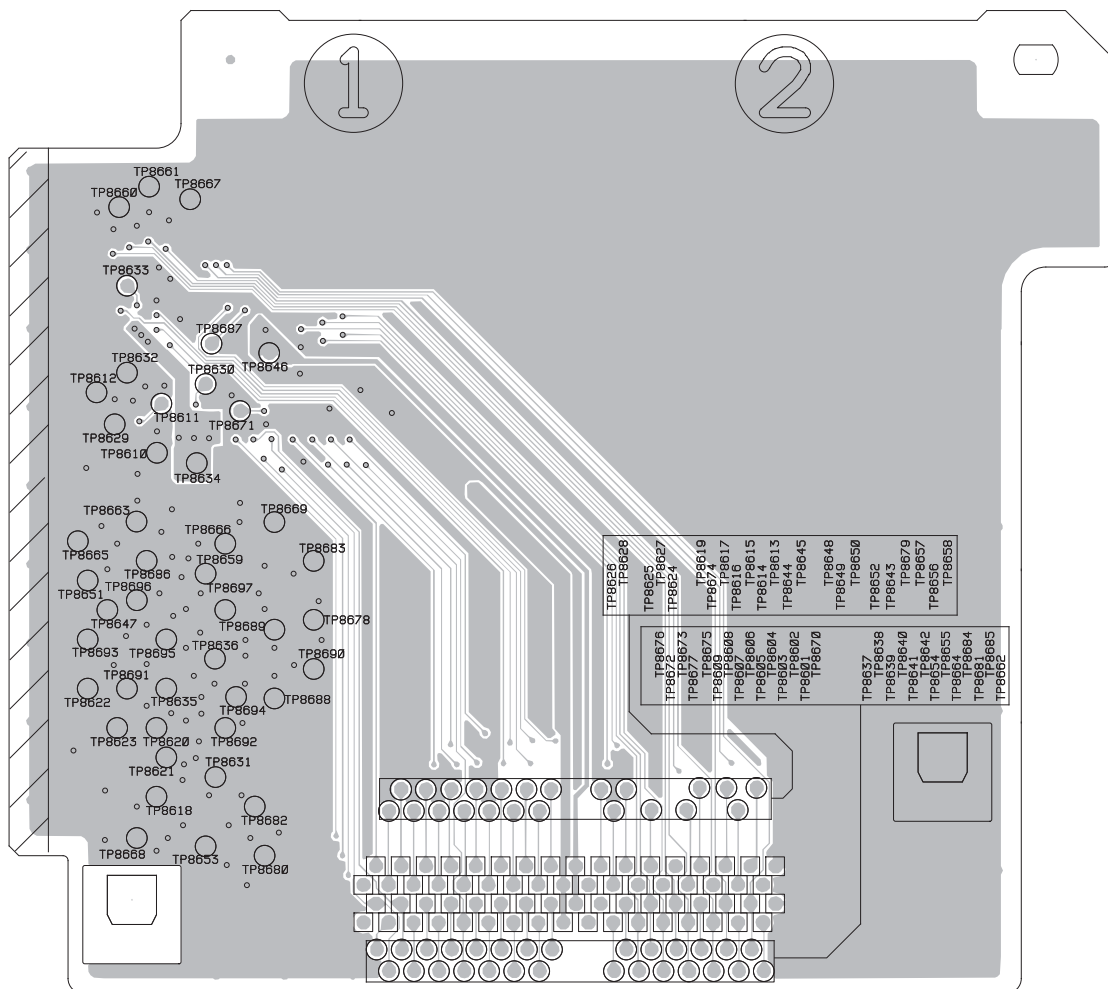
CI CARD ASSY

C

D

E

F

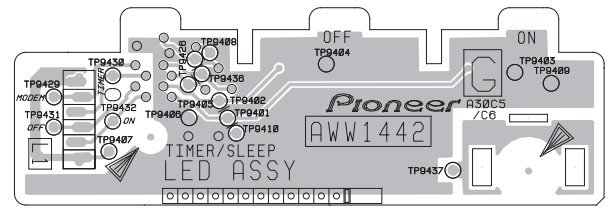


(ANP2228-A)

SIDE B

A

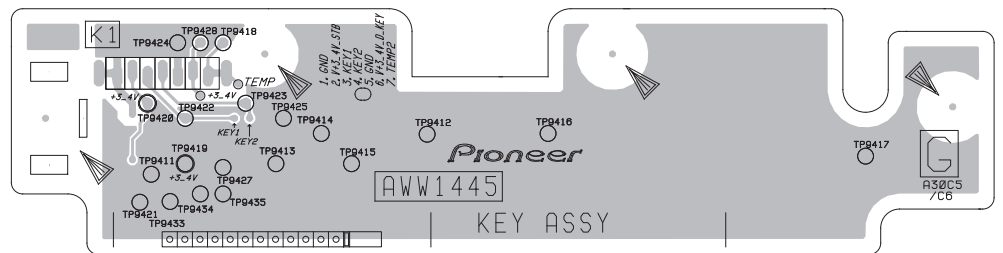
LED ASSY



(ANP2228-A)

B

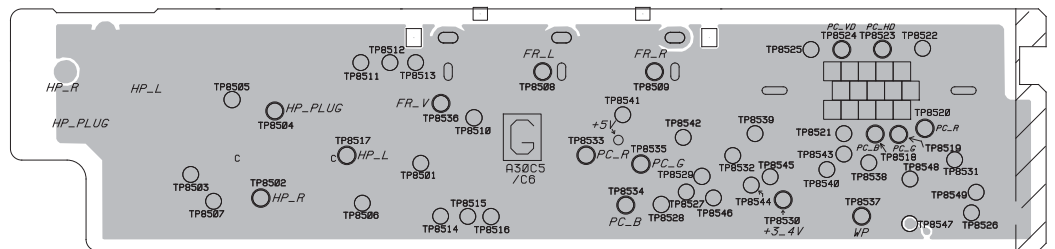
KEY ASSY



(ANP2228-A)

C

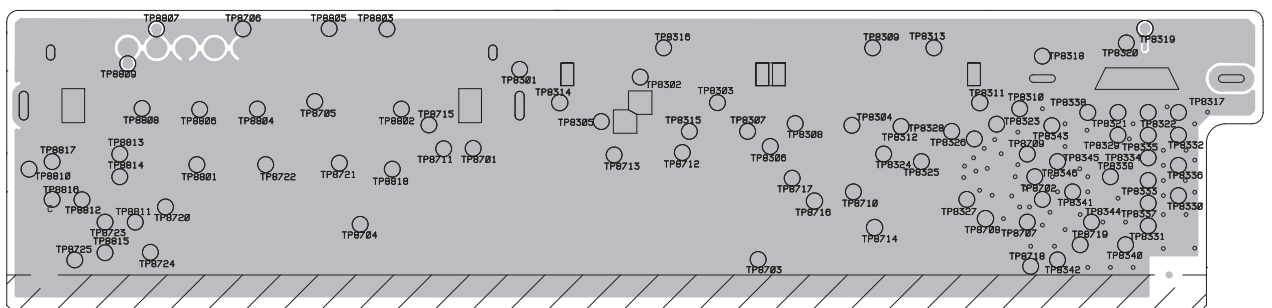
FRONT IO ASSY



(ANP2228-A)

D


REAR IO ASSY



(ANP2228-A)


E

12. PCB PARTS LIST

- NOTES:
- Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
 - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).
- | | | | | | | | | | | |
|-------|---|----------------------|-------|------|-------|---------|---|---|---|---|
| 560 Ω | → | 56 × 10 ¹ | → | 561 | ..... | RD1/4PU | 5 | 6 | 7 | J |
| 47 kΩ | → | 47 × 10 ³ | → | 473 | ..... | RD1/4PU | 4 | 7 | 3 | J |
| 0.5 Ω | → | R50 | ..... | RN2H | R | 5 | 0 | K | | |
| 1 Ω | → | 1R0 | ..... | RS1P | 7 | R | 0 | K | | |
- Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
- | | | | | | | | | | | | |
|---------|---|-----------------------|---|------|-------|---------|---|---|---|---|---|
| 5.62 kΩ | → | 562 × 10 ¹ | → | 5621 | | RN1/4PC | 5 | 6 | 2 | 1 | F |
|---------|---|-----------------------|---|------|-------|---------|---|---|---|---|---|
- Meaning of the figures and others in the parentheses in the parts list.
- Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
- IC 301 (A, 91, 111) IC NJM2068V

Mark No. Description Part No.

LIST OF ASSEMBLIES

NSP	1..MAIN ASSY(EU MR)	AWV2570
	2..FRONT_HDM_USB_ASSY(EU MR)	AWW1412
	2..MAIN BLOCK ASSY(EU MR)	AWW1413
NSP	1..FUKUGO ASSY(EU MR)	AWV2571
	2..REAR IO ASSY(EU MR)	AWW1441
	2..LED ASSY(EU MR)	AWW1442
	2..FRONT IO ASSY(EU MR)	AWW1443
	2..CI CARD ASSY(EU MR)	AWW1444
	2..KEY ASSY(EU MR)	AWW1445
	1..POWER SUPPLY UNIT	AXY1223


Mark No. Description Part No.

Unit Name: FRONT_HDM_USB ASSY(EU MR)

SEMICONDUCTORS

IC 7301	BR24L02FV-W
IC 7302	CXB1443R
Q 7301	RN1902
Q 7302	UMD2N
D 7301	UDZS6R8(B)

MISCELLANEOUS

 L 7301,7302 CHIP BEEDS FILTER	BTX1042
JA 7301 HDMI CONNECTOR	AKP1318
JA 7303 USB CONNECTOR	VKB1248
CN 7302 30P CONNECTOR	AKM1442
CN 7304 CONNECTOR	AKM1291

RESISTORS

R 7322	RS1/16SS4701F
R 7340	RS1/8SQ0R0J
Other Resistors	RS1/16SS###J

CAPACITORS

C 7301	ACH1421
C 7303-7311	CKSSYB104K10

Unit Name: MAIN BLOCK ASSY(EU MR)

SEMICONDUCTORS

NSP IC 6403	AGC1089
NSP IC 6701	AGC1088
NSP IC 6811	AGC1086
NSP IC 7202	AGC1087

MISCELLANEOUS

3001 SCREW	BPZ26P050FTC
3001 HEAT SINK B	ANH1645
3002 THERMAL SHEET B	AEB1417

RESISTORS

All Resistors	RS1/8SQ###J
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MISCELLANEOUS

 U 5201 FE	AXF1195
 U 5301 FE	AXF1191

Mark No.	Description	Part No.
Block Name: POWER 0 BLOCK(EH)		

SEMICONDUCTORS

IC 4301	R5523N001B
IC 4302,4309	PQ200WNA1ZPH
IC 4304	MB3842PFV-G-E1
IC 4305,4310	NJM2846DL3-05
IC 4306	BD8903EV

IC 4308

IC 4308	NJM78M12DL1A
IC 4312,4313	AAT4610AIGV-1
Q 4301,4302,4306	DTC124EUA
Q 4303	2SA1576A
Q 4304,4305	DTA143EUA

Q 4308-4310

Q 4308-4310	DTC124EUA
Q 4311	UMD2N
D 4301,4304,4306,4308	1SS352
D 4312	RB521S-40
D 4316	1SS352

MISCELLANEOUS

L 4302	CHIP BEEDS FILTER	BTX1039
L 4305	INDUCTOR	BTH1111
L 4306	CHIP COIL	BTH1126

RESISTORS

R 4301,4304,4305,4308	RS1/8SQ0R0J
R 4310,4322	RS1/10SR0R0J
R 4312,4316,4334,4338	RS1/8SQ0R0J
R 4325	RS1/16SS3901F
R 4326	RS1/16SS1003D

R 4327	RS1/16SS2202F
R 4340	RS1/16SS2201F
R 4343	RS1/16SS4701F
R 4344	RS1/16SS5101F
R 4345	RS1/16SS2701F

R 4346	RS1/16SS1501F
R 4349,4359	RS1/8SQ0R0J
Other Resistors	RS1/16SS###J

CAPACITORS

C 4301,4305,4308,4321	CKSRYPB105K10
C 4303	CKSRYPB104K25
C 4304	CKSSYPB682K25
C 4306,4331	BCG1064
C 4309,4310	CEHVAW330M25

C 4311	ACG1147
C 4313,4327,4345	DCH1201
C 4315,4316,4342,4343	DCH1165
C 4322,4324,4325	CKSRYB105K10
C 4323	CEHVAW101M6R3

C 4332,4335,4347,4348	CKSSYB104K10
C 4338	CKSSYB473K16
C 4352	CKSSYB104K10

Block Name: POWER 1 BLOCK(EH)

SEMICONDUCTORS

IC 4401,4403,4406	MM1593DF
IC 4402	BD8606FV
IC 4404	NJM2846DL3-33
Q 4401,4402	RN1902
Q 4403,4413	UPA191ZTE

Q 4404-4406.4414 DTC124EUA

R 4201,4207,4209-4211	RS1/8SQ0R0J
R 4217,4218	RS1/8SQ0R0J
R 4251,4253	RS1/10SR0R0J
R 4252,4254	RS1/10SR102J
Other Resistors	RS1/16SS###J

Mark No. Description**Part No.****Mark No. Description****Part No.**

Q 4407,4408
Q 4409,4410
Q 4411,4412,4415
Q 4416

2SC4081
DTA124EUA
RSS100N03
RSS090P03

L 4502 CHIP BEEDS FILTER
L 4503 CHIP INDUCTOR(2.2 UH)
L 4505 INDUCTOR
L 4506 INDUCTOR(270 UH)

BTX1039
ATH1244
CTH1254
ATH1242

Q 4417,4418
D 4401,4402,4410
D 4405-4407

SP8M4
1SS352
RB060M-30

L 4507 INDUCTOR

ATH1235

RESISTORS

R 4503,4504,4506
R 4510,4512
R 4511
R 4524,4525
R 4536

RS1/8SQ0R0J
RS1/4SA101J
RS1/4SA150J
RS1/10SR0R0J
RS1/16SS1003D

R 4537,4539
Other Resistors

RS1/16SS3302D
RS1/16SS###J

CAPACITORS

C 4502,4506,4515,4530
C 4504
C 4507,4517
C 4527,4528
C 4529

CCSSCH101J50
CKSSYB104K10
DCH1165
CKSSYB103K25
CKSSYB223K16

C 4535-4537
C 4538
C 4539-4541,4546
C 4542,4543
C 4544,4545

ACH1495
CEHVAW100M35
CKSRYB104K50
CKSRYB104K25
CKSRYB224K16

C 4547
C 4548,4549
C 4552,4553

CKSRYB682K50
CKSRYB104K16
BCG1059

Block Name: POWER_3 BLOCK(EH)**SEMICONDUCTORS**

IC 4601
IC 4602-4604,4606
Q 4601,4603,4618
Q 4602
Q 4604,4606,4617

LTC3407EMSE-2
NJM2846DL3-18
RSS090P03
UPA1917TE
2SC4081

Q 4605,4608
Q 4609,4610,4612
Q 4613
Q 4614,4615
Q 4616

DTC124EUA
RN1902
RSS100N03
RTQ045N03
RTQ040P02

D 4603,4607,4608,4612
D 4609,4610

1SS352
RB551V-30

MISCELLANEOUS

L 4601 CHIP BEEDS FILTER
L 4602,4603 CHIP INDUCTOR(2.2 UH)
L 4604,4605 CHIP BEEDS FILTER

BTX1039
ATH1244
BTX1042

RESISTORS

R 4601,4606-4617,4632
R 4659
R 4663
R 4666
R 4667

RS1/8SQ0R0J
RS1/16SS1503D
RS1/16SS1003D
RS1/16SS2003D
RS1/16SS6202D

R 4687,4688,4694
Other Resistors

RS1/8SQ0R0J
RS1/16SS###J

CAPACITORS

C 4602,4621,4623,4634
C 4604,4608

CKSSYB104K10
CKSRYB104K16

MISCELLANEOUS

L 4401-4406 CHIP BEEDS FILTER
L 4409-4411 INDUCTOR(2.8 UH)
L 4413-4416 CHIP BEEDS FILTER

BTX1039
ATH1243
BTX1039

RESISTORS

R 4401-4403,4411-4413
R 4406,4438
R 4407,4425-4427,4441
R 4415,4416,4488
R 4421

RS1/8SQ0R0J
RS1/16SS1203D
RS1/16SS3302D
RS1/8SQ0R0J
RS1/16SS5602D

R 4429
R 4440
R 4442
R 4444,4445
Other Resistors

RS1/16SS2702D
RS1/16SS1002D
RS1/16SS3902D
RS1/16SS3302D
RS1/16SS###J

CAPACITORS

C 4401,4415,4458
C 4402,4413,4414,4421
C 4403-4406,4409,4410
C 4407,4455,4457
C 4411

CKSRYB104K16
DCH1201
DCH1165
CKSRYB682K50
CCG1232

C 4417,4423,4426,4434
C 4420,4424,4444
C 4422,4429,4430
C 4427,4465
C 4432,4437

CKSSYB104K10
CKSSYB471K50
DCH1201
CKSRYB105K10
CCSSCH101J50

C 4435
C 4436,4439
C 4438
C 4440
C 4441

CCSSCH470J50
CKSSYB152K50
CCSSCH330J50
CKSSYB682K25
CKSSYB221K50

C 4447,4448,4451,4452
C 4454
C 4462-4464,4466-4468
C 4470

BCG1059
CKSRYB334K10
BCG1059
CKSSYB104K10

Block Name: POWER_2 BLOCK(EH)**SEMICONDUCTORS**

IC 4501
IC 4503
Q 4502
Q 4504
Q 4507

BD8624EFV
LNBH23PP/1B
DTC124EUA
RN1902
RTQ045N03

Q 4509
Q 4510
D 4501
D 4508
D 4509

DTA124EUA
2SC4081
1SS352
D1FM3
TDZ5R1

D 4510,4511
D 4513

RB520S-30
RB060M-30

MISCELLANEOUS

L 4501 CHIP BEEDS FILTER

BTX1042

5		6		7		8	
Mark	No. Description	Part No.	Mark	No. Description	Part No.		
C	4605,4606,4609,4654	CKSRYB105K10	C	4806,4808,4810	CKSSYB473K16		
C	4610,4612	BCG1059	C	4811-4817	CKSSYB104K10		
C	4615	CKSSYB102K50					
C	4616,4617	CCSSCH470J50	C	4818-4820	DCH1201	A	
C	4618	CKSSYB103K16	Block Name: HDMI_RX BLOCK(EH)				
C	4626,4628,4638,4640	DCH1201	SEMICONDUCTORS				
C	4636,4649,4651	CKSSYB104K10	IC	4901	SI19135ACTU		
C	4641,4656	DCH1201	Q	4901,4902	DTC124EUA		
			Q	4903	2SC4081		
C	4645,4648	CCSSCH101J50	Q	4904-4907,4914	UMD2N		
			Q	4908	RN1902		
Block Name: VDEC BLOCK(EH)							
SEMICONDUCTORS			Q	4910	2SA1576A		
IC	4701	HY57V641620FTP-6	Q	4913	HN1C01FU	B	
IC	4702	CM0048BF	D	4901	RB520S-30		
Q	4701,4702	2SA1576A	MISCELLANEOUS				
MISCELLANEOUS			L	4901-4905 CHIP SOLID INDUCTOR	QTL1013		
L	4701,4707 CHIP BEEDS FILTER	BTX1042	L	4906,4907 CHIP BEEDS FILTER	BTX1042		
L	4702,4703 COIL	LCYC6R8K2125	F	4901,4902 CHIP FERRITE BEADS	ATF1211		
L	4708 CHIP BEEDS FILTER	BTX1042	⚠ X	4901 CRYSTAL(28.322 MHz)	ASS1226		
⚠ F	4701 INDUCTOR	CTF1557	CN	4901 30P CONNECTOR	AKM1442		
⚠ X	4701 CRYSTAL(28.63636 MHz)	ASS1214	RESISTORS				
RESISTORS			R	4940-4943,4976-4979	ACN1275		
R	4703,4727	RS1/8SQ0R0J	R	4944	RAB4CQ100J		
R	4710,4720	RS1/16SS1500F	R	4945-4954	RAB4CQ680J	C	
R	4711,4721	RS1/16SS2201F	R	4986	RS1/8SQ0R0J		
R	4712,4722	RS1/16SS1101F	Other Resistors		RS1/16SS###J		
R	4713,4715,4723	RS1/16SS2701F	CAPACITORS				
			C	4901-4928,4932,4933	CKSSYB102K50		
R	4714	RS1/16SS1001F	C	4929	CKSSYB103K16		
R	4726,4737-4745	RAB4CQ470J	C	4930,4931	CCSSCH9R0D50		
R	4746-4752	RAB4CQ101J	C	4934,4937-4940	CKSSYB104K10		
Other Resistors		RS1/16SS###J	C	4936,4941,4946,4951	DCH1201		
CAPACITORS			C	4942-4945,4947-4950	CKSSYB104K10		
C	4701,4704-4711	CKSRYB105K10	C	4952-4960	CKSSYB104K10	D	
C	4702,4703	CCSRCH300J50	Block Name: HDMI_SW BLOCK(EH)				
C	4712,4718,4720	CKSSYB103K16	SEMICONDUCTORS				
C	4713,4717	CCSSCH330J50	IC	5001	CXB1444R		
C	4714,4719	CCSSCH680J50	IC	5002-5004	BR24L02FV-W		
			Q	5007-5009	UMD2N		
C	4715,4716	CKSSYB102K50	Q	5011-5013	RN1902		
C	4721	CEHVAW101M6R3	D	5004-5006	UDZS6R8(B)		
C	4722-4736,4738-4774	CKSSYB104K10	MISCELLANEOUS				
C	4737,4793-4797	DCH1201	F	5001,5002 CHIP SOLID INDUCTOR	DTL1041		
C	4787	CKSSYB104K10	JA	5001-5003 HDMI CONNECTOR	AKP1318	E	
Block Name: ADCC BLOCK(EH)			RESISTORS				
SEMICONDUCTORS			R	5006	RAB4CQ0R0J		
IC	4801	AD9985KSTZ-110	R	5058	RS1/16SS4701F		
MISCELLANEOUS			Other Resistors		RS1/16SS###J		
L	4801,4802 CHIP BEEDS FILTER	BTX1042	CAPACITORS				
RESISTORS			C	5001	BCG1059		
R	4804	RS1/16SS2701F	C	5003-5007,5009-5013	CKSSYB104K10		
R	4805-4808	RS1/16SS470J	C	5014	DCH1201		
R	4809-4814	RAB4CQ680J	C	5015,5016,5018,5019	CKSSYB104K10		
R	4815	RAB4CQ103J	Block Name: AV_SW BLOCK(EH)				
Other Resistors		RS1/8SQ###J	SEMICONDUCTORS				
CAPACITORS			IC	5101	R2S11006FT	F	
C	4801	CKSSYB823K10					
C	4802	CKSSYB822K16					
C	4803-4805,4807,4809	CKSSYB104K10					

Mark No. Description

Q 5151,5152,5161,5162
Q 5171,5172

Part No.

2SA1576A
2SA1576A

Mark No. Description**CAPACITORS**

C 5801-5804,5807-5814
C 5815,5817,5841
C 5818,5842,5844,5846
C 5824,5861,5864,5865
C 5835-5838

Part No.

CKSRYB105K10
CKSSYB473K16
CKSSYB103K16
CCSSCH560J50
CCG1205

MISCELLANEOUS

L 5191-5193 CHIP BEEDS FILTER

BTX1042

RESISTORS

R 5151,5154,5161,5164
R 5171,5174
R 5191
Other Resistors

RS1/10SR510J
RS1/10SR510J
RS1/8SQ0R0J
RS1/16SS###J

C 5843,5845,5847,5855
C 5851,5853,5911,5912
C 5852,5854,5856,5859
C 5857,5858
C 5860,5862,5871,5873

DCH1201
DCH1165
CKSSYB103K16
CCSSCH9R0D50
DCH1201

CAPACITORS

C 5105,5131,5152,5153
C 5109-5112,5138-5143
C 5132-5136,5151,5161
C 5137
C 5162,5163,5172,5173

DCH1201
CKSRYB105K10
CKSSYB104K10
DCH1165
DCH1201

C 5863,5870,5872,5874
C 5875,5877,5886,5888
C 5876,5878,5885,5887
C 5901,5902,5913
C 5921,5922,5941,5942

CKSSYB103K16
DCH1201
CKSSYB103K16
CKSSYB102K50
DCH1201

C 5171

CKSSYB104K10

C 5923,5924,5943,5944
C 5931,5932
C 5933
C 5951,5952,5955,5956
C 5960,5962,5978

CCSSCH150J50
DCH1165
CKSSYB682K25
CKSSYB472K16
DCH1201

Block Name: RGB_SW BLOCK(EH)**SEMICONDUCTORS**

IC 5501
Q 5537
Q 5571,5581
Q 5572,5582

R2S11001FT
2SA1576A
HN1B04FU
HN1C01FU

C 5961,5963,5977
C 5971,5972,5980
C 5979

CKSSYB104K10
CKSRYB105K10
CEHVAW470M6R3

MISCELLANEOUS

L 5501 CHIP BEEDS FILTER

BTX1042

Block Name: DVB_S_TUNER BLK(EH)**SEMICONDUCTORS**

IC 5201
⚠ D 5202
D 5203

STV-0903
1.5SMC24A
RB060L-40

MISCELLANEOUS

L 5202 CHIP BEEDS FILTER
F 5201 FERRITE CORE
F 5206,5207 FERRITE CORE
⚠ X 5201 CRYSTAL(27 MHz)

BTX1042
VTF1080
VTF1091
ASS1225

RESISTORS

R 5201,5203,5205
R 5204
R 5242
R 5243,5244
Other Resistors

RS1/10SR0R0J
RS1/10SR103J
RAB4CQ103J
RAB4CQ470J
RS1/16SS###J

CAPACITORS

C 5201,5202
C 5203
C 5204,5212-5220
C 5221,5222
C 5225-5261

BCG1059
CKSSYB102K50
CKSSYB103K16
CCSSCH120J50
CKSSYB103K16

C 5262,5263
C 5264,5265,5267-5269

CEHVAW101M6R3
CKSSYB104K10

Block Name: DVB_T_TUNER BLK(EH)**SEMICONDUCTORS**

IC 5301
Q 5303
Q 5304,5305
Q 5306
Q 5307

TC7W66FU
DTC124EUA
2SA1576A
HN1B04FU
HN1C01FU

Q 5308
⚠ D 5301

RN1902
1.5SMC6.8A

Block Name: MSP BLOCK(EH)**SEMICONDUCTORS**

IC 5801
IC 5911,5931,5951
IC 5971
Q 5901
Q 5971

MSP5651M-QK-C3
NJM4565V
BH3544F
HN1A01FU
2SC4081

D 5807,5808

UDZS8R2(B)

MISCELLANEOUS

⚠ X 5801 CRYSTAL(20.25 MHz)

ASS1217

RESISTORS

R 5806
R 5821-5823
R 5993-5995
Other Resistors

RS1/10SR0R0J
RAB4CQ471J
RS1/8SQ0R0J
RS1/16SS###J

5		6		7		8	
Mark No.	Description	Part No.	Mark No.	Description	Part No.		
MISCELLANEOUS			Block Name: CIMAX BLOCK(EH)				
L	5301,5303,5304 CHIP COIL	BTH1121	SEMICONDUCTORS				A
L	5306-5308 CHIP BEEDS FILTER	BTX1042	IC	8101	TC74VHC08FTS1		
F	5301-5306 FERRITE CORE	VTF1080	IC	8102	CIMAXSP2L		
F	5307,5308 INDUCTOR	CTF1557	IC	8103,8104,8113	TC74VHC32FTS1		
F	5309-5313 FERRITE CORE	VTF1080	IC	8105,8106	TC74VHCT245AFTS1		
			IC	8107,8108	TC74VHCT541AFTS1		
RESISTORS			IC	8109-8112	TC74VHCT373AFT		
R	5302,5311,5318	RS1/10SR0R0J	Q	8101-8106	DTC124EUA		
R	5304	RS1/8SQ0R0J	MISCELLANEOUS				
Other Resistors		RS1/16SS###J	F	8101,8102 FERRITE CORE	VTF1091		
CAPACITORS			RESISTORS				B
C	5303,5316	CKSSYB103K16	R	8101-8103	RS1/8SQ0R0J		
C	5307,5311,5324,5330	DCH1201	R	8126,8219	RAB4CQ471J		
C	5309	CKSSYB104K10	R	8145,8152-8157,8160	RAB4CQ470J		
C	5319	CEHVAW101M6R3	R	8150,8151	RAB4CQ103J		
C	5322	CKSRYB682K50	R	8158,8159	RAB4CQ221J		
C	5329	BCG1064	R	8161,8163-8165	RAB4CQ470J		
Block Name: COFDEM BLOCK(EH)			R	8162,8173,8174,8180	RAB4CQ104J		
SEMICONDUCTORS			R	8167,8175,8176,8181	RAB4CQ220J		
IC	5401	DRX3975D-QI-B1	R	8169-8172,8177,8179	RAB4CQ470J		
Q	5402	UMD2N	R	8178,8182,8196,8200	RAB4CQ101J		
MISCELLANEOUS							
L	5401-5403 CHIP BEEDS FILTER	BTX1042	R	8183-8189,8191,8192	RAB4CQ470J		C
L	5404 CHIP COIL	LCYAR82J2520	R	8193,8197,8198,8201	RAB4CQ220J		
F	5402-5404 FERRITE CORE	VTF1091	R	8194,8199,8203,8210	RAB4CQ470J		
△ X	5401 CRYSTAL RESONATOR	VSS1221	R	8202	RAB4CQ101J		
			R	8211	RAB4CQ470J		
RESISTORS			Other Resistors		RS1/16SS###J		
R	5401	RS1/8SQ0R0J	CAPACITORS				
R	5434-5436	RAB4CQ470J	C	8101	CKSSYB102K50		
R	5438	RAB4CQ471J	C	8102,8103	DCH1201		
Other Resistors		RS1/16SS###J	C	8104-8111,8114-8123	CKSSYB104K10		
			C	8112,8113	CKSRYB105K10		D
CAPACITORS			Block Name: CI_CARD_1 BLOCK(EH)				
C	5401,5402	CCSSCH101J50	MISCELLANEOUS				
C	5403	CKSRYB104K16	JA	5601 PC CARD CONNECTOR	AKP1341		
C	5404,5417,5419,5420	CKSSYB104K10	RESISTORS				
C	5408	CCSSCJ3R0C50	All Resistors		RS1/16SS###J		
C	5409	CCSSCH180J50	CAPACITORS				
			C	5604	CEHVAW470M16		
C	5411,5412	CKSSYB103K16	C	5605	DCH1201		
C	5415,5416	CCSSCH8R0D50	Block Name: VBI_SLICER BLOCK(EH)				E
C	5418,5421,5427,5429	CKSSYB102K50	SEMICONDUCTORS				
C	5422,5424	CCG1205	IC	5701	TC90173FG		
C	5423,5425,5426,5428	CKSSYB104K10	D	5701	HSM107S-E		
			MISCELLANEOUS				
C	5430	CKSSYB104K10	L	5701,5702 CHIP BEEDS FILTER	BTX1042		
Block Name: TS_SELECT BLOCK(EH)			RESISTORS				
SEMICONDUCTORS			R	5701	RS1/8SQ0R0J		
IC	8001-8003	TC74LCX157FTS1	R	5714,5715	RAB4CQ151J		
IC	8051	TC74LCX245FTS1	R	5716	RAB4CQ0R0J		F
RESISTORS			Other Resistors		RS1/16SS###J		
R	8005,8006	RAB4CQ151J	MISCELLANEOUS				
R	8053-8055,8057	RAB4CQ470J	RESISTORS				
R	8056,8058	RAB4CQ103J					
Other Resistors		RS1/16SS###J					
CAPACITORS							
C	8001-8003,8051	CKSSYB104K10					

Mark No. Description**CAPACITORS**

C 5701
C 5704
C 5705-5712,5715-5720
C 5714

Part No.

CKSRYB474K10
CCSSCH680J50
CKSSYB104K10
DCH1201

Block Name: 7404_0 BLOCK(EH)**SEMICONDUCTORS**

IC 6001

BCM7404XKPB11G

MISCELLANEOUS

F 6001 FERRITE CORE
JA 6002 RJ45 CONNECTOR TRNS

VTF1084
VKN2078

RESISTORS

R 6002-6004
R 6007-6009,6016
R 6014
R 6018
R 6019

R 6021,6022,6039,6040
R 6037
R 6045,6066-6069,6072
R 6051,6071
R 6073

RS1/10SR750J
RAB4CQ101J
RS1/16SS1101F
RS1/8SQOR0J
RS1/16SS1001F

RS1/16SS49R9F
RS1/16SS1002F
RAB4CQ470J
RAB4CQ472J
RS1/10SR75R0F

R 6079-6084
Other Resistors

RAB4CQ101J
RS1/16SS###J

CAPACITORS

C 6001
C 6004
C 6008,6015,6016
C 6009-6011,6013,6014

CKSSYB102K50
CCSSCH150J50
DCH1201
CKSSYB104K10

Block Name: 7404_1 BLOCK(EH)**SEMICONDUCTORS**

IC 6102

LP2995M

MISCELLANEOUS

L 6101 INDUCTOR
L 6103 CHIP BEEDS FILTER
L 6111-6118 CHIP BEEDS FILTER
F 6101-6111 FERRITE CORE
⚠ X 6101 CRYSTAL RESONATOR

LCTAW2R2J2520
BTX1042
BTX1042
VTF1084
BSS1134

RESISTORS

R 6133,6134
R 6156,6157
Other Resistors

RS1/10SR3010F
RAB4CQ472J
RS1/16SS###J

CAPACITORS

C 6101,6102,6180-6183
C 6103,6104
C 6105,6106,6109-6112
C 6113,6114
C 6115,6118-6120,6123

BCG1059
CCSSCH120J50
CKSSYB103K16
CCSSCH9R0D50
CKSSYB103K16

C 6116,6117,6188-6190
C 6121,6122,6125,6128
C 6124,6126,6127
C 6129,6134,6135
C 6130-6133

ACG1122
CKSSYB102K50
CKSSYB103K16
CKSSYB102K50
CKSSYB103K16

C 6136,6137
C 6139-6158,6161-6164
C 6159,6160,6165,6168

ACH1421
CKSSYB104K10
DCH1201

Mark No. Description

C 6166,6167,6170-6173
C 6169,6174,6175,6187

C 6176-6179,6184-6186

Part No.

CKSSYB104K10
DCH1201

CKSSYB104K10

Block Name: 7404_DDR BLOCK(EH)**SEMICONDUCTORS**

IC 6201-6204

EDD5116AFTA-5B-E

MISCELLANEOUS

L 6201,6202 CHIP BEEDS FILTER

BTX1042

RESISTORS

R 6259-6262,6283
R 6263,6267-6269
R 6264-6266,6270,6284
R 6271-6282,6286-6290
R 6285,6291-6295,6301

RAB4CQ510J
RAB4CQ220J
RAB4CQ101J
RAB4CQ220J
RAB4CQ101J

R 6296-6300,6302-6309
R 6310,6311,6315,6316
R 6312-6314
Other Resistors

RAB4CQ220J
RAB4CQ101J
RAB4CQ220J
RS1/16SS###J

CAPACITORS

C 6201-6204
C 6205
C 6207,6208,6210-6222
C 6209,6223,6249
C 6224-6248,6250-6253

CKSSYB471K50
BCG1059
CKSSYB104K10
DCH1201
CKSSYB104K10

Block Name: 7404_FLASH BLOCK(EH)**SEMICONDUCTORS**

IC 6401
IC 6402
D 6401

TC74VHC02FTS1
PST3628UR
1SS352

RESISTORS

R 6457-6466
R 6467
R 6471
Other Resistors

RAB4CQ472J
RAB4CQ103J
RS1/10SR0R0J
RS1/16SS###J

CAPACITORS

C 6401
C 6402-6405
C 6406

CKSSYB103K16
CKSSYB104K10
CKSSYB473K16

Block Name: AV_IO BLOCK(EH)**SEMICONDUCTORS**

Q 7501,7502,7505,7506
Q 7503,7504
D 7501-7505,7507
D 7506,7508,7515,7516
D 7509-7513

2SC4081
UMD2N
UDZS5R1(B)
UDZS12(B)
UDZS5R1(B)

MISCELLANEOUS

L 7502 CHIP COIL
F 7501-7503 INDUCTOR
F 7504-7511 CHIP FERRITE BEADS
JA 7501 OPT. LINK OUT 12MB/S
JA 7502 RGB CONNECTOR

BTH1103
CTF1557
ATF1229
VKS1001
AKP1265

JA 7503 MINI JACK(4P)

AKN1073

RESISTORS

R 7501,7503-7505,7507

RS1/10SR151J

5				6				7				8											
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	Mark	No.	Description	Part No.								
R	7508		RS1/10SR151J	Block Name: ARIA_DDR BLOCK(EH)																			
R	7509		RS1/10SR0R0J																				
R	7519-7522,7530-7532		RS1/10SR75R0F																				
R	7541		RS1/10SR75R0F																				
Other Resistors			RS1/16SS###J																				
CAPACITORS				SEMICONDUCTORS																			
C	7501-7504		CCG1205	IC	6702-6704		EDD1232ABBH-5C-E	MISCELLANEOUS															
C	7505-7511,7513,7514		CKSSYB102K50																				
C	7512		CKSSYB103K16																				
C	7515		CCSSCH680J50																				
C	7516		CKSSYB102K50	L	6701-6703	CHIP BEEDS FILTER	BTX1042	RESISTORS															
C	7519-7522,7526-7529		CKSRYB105K10																				
C	7525,7530		CCSRCH101J50																				
C	7531		CKSRYB105K10																				
C	7532,7533		ACH1454	R	6745-6780		RAB4CQ470J	CAPACITORS															
C	7534-7536		CKSSYB471K50																				
C	7519-7522,7526-7529		CKSRYB105K10																				
C	7525,7530		CCSRCH101J50																				
C	7531		CKSRYB105K10	Other Resistors			RS1/16SS###J	SEMICONDUCTORS															
C	7532,7533		ACH1454																				
C	7534-7536		CKSSYB471K50																				
C	7519-7522,7526-7529		CKSRYB105K10																				
C	7525,7530		CCSRCH101J50	Block Name: IF_UCOM BLOCK(EH)																			
C	7531		CKSRYB105K10																				
C	7532,7533		ACH1454																				
C	7534-7536		CKSSYB471K50																				
Block Name: ARIA_0 BLOCK(EH)				SEMICONDUCTORS																			
SEMICONDUCTORS				IC	6801		PST3628UR	MISCELLANEOUS															
IC	6501		PD6568A																				
MISCELLANEOUS			IC	6802-6804		TC74VHC126FTS1																	
L	6501-6503	CHIP BEEDS FILTER	BTX1042	IC	6805		TC74VHC08FTS1																
L	6504,6505	CHIP BEEDS FILTER	BTX1039	IC	6806		TC74VHC00FTS1	RESISTORS															
L	6506-6509	INDUCTOR	LCYC1R0K1608	Q	6801-6803,6812-6814		DTC124EUA																
△ X	6501	CRYSTAL(27 MHz)	ASS1225	Q	6804,6805		2SC4081																
				Q	6806,6807,6817		2SA1576A																
RESISTORS				Q	6808		DTA124EUA	CAPACITORS															
R	6501-6504		RS1/8SQ0R0J	Q	6809,6810		HN1C01FU																
R	6506		RAB4CQ220J	Q	6816,6819,6820		DTC124EUA																
R	6514,6515		RAB4CQ103J	Q	6901		UMD2N																
Other Resistors			RS1/16SS###J	D	6801-6805		1SS352	SEMICONDUCTORS															
CAPACITORS				MISCELLANEOUS																			
C	6501,6504-6513,6518		CKSSYB104K10	△ X	6801	CERAMIC OSCILLATOR	CSS1616									RESISTORS							
C	6502,6514,6523		DCH1201	△ X	6802	CRYSTAL OSCILLATOR	ASS1212																
C	6503,6515,6516		CKSRYB105K10	SEMICONDUCTORS																			
C	6517		CCG1232	R	6802,6806		RS1/8SQ0R0J																
C	6519-6522,6524		CKSRYB105K10	R	6880,6885		RAB4CQ103J	MISCELLANEOUS															
C	6525-6528		CKSSYB104K10	R	6883		RAB4CQ473J																
C	6529-6533,6578		CKSRYB105K10	R	6884		RAB4CQ471J																
C	6576		CCSSCH100D50	R	6893,6894,6896		RS1/10SR122J																
C	6577		CCSSCH120J50	RESISTORS				CAPACITORS															
C	6580-6587,6589-6600		CKSRYB105K10	R	6895		RS1/10SR220J																
				Other Resistors			RS1/16SS###J																
Block Name: ARIA_1 BLOCK(EH)				SEMICONDUCTORS																			
MISCELLANEOUS				C	6801		CKSSYB102K50	RESISTORS															
L	6601	CHIP BEEDS FILTER	BTX1042	C	6802		CKSSYB472K16																
△ F	6601-6616	FERRITE BEADS ARRAY	ATF1228	C	6803,6804		CKSSYB471K50																
				C	6805,6806		CCSSCH8R0D50																
RESISTORS				C	6807,6809,6811		CKSSYB104K10	CAPACITORS															
R	6603,6604,6607		RS1/16SS2201F	C	6808,6812		DCH1201																
R	6609-6611		RS1/16SS2201F	C	6810		CKSSYB103K16																
R	6613-6627,6629		RAB4CQ101J	C	6814-6824		CKSSYB104K10																
R	6628		RAB4CQ121J	Block Name: EMMA2 BLOCK(EH)				SEMICONDUCTORS															
R	6630		RAB4CQ220J	SEMICONDUCTORS																			
Other Resistors			RS1/16SS###J	IC	7002		TC74VHC08FTS1																
CAPACITORS				IC	7003		UPD61123F1-100KA3A																
C	6615		DCH1201	IC	7004		BR24L64F-W	RESISTORS															
C	6616-6629		CKSSYB104K10	IC	7005		TC7WHU04FU																
C	6632		CCSSCH221J50	IC	7006		TC74HC4066AFT																
C	6634		CKSRYB105K10																				

Mark No. Description**Part No.**

Q 7001
Q 7002,7003,7006
Q 7005,7008
Q 7007,7010
D 7010

2SJ461A
DTC124EUA
SSM6N17FU
UMD2N
1SS301

MISCELLANEOUS

L 7001-7003 CHIP BEEDS FILTER
F 7001 FERRITE CORE
F 7002 CHIP FERRITE BEADS
⚠ X 7001 CRYSTAL(27 MHz)

BTX1042
VTF1091
ATF1212
ASS1225

RESISTORS

R 7026-7028
R 7029,7036
R 7033
R 7035
R 7045,7067,7070,7073

RS1/16SS2000D
RS1/16SS6200D
RS1/16SS3300D
RS1/16SS2200D
RAB4CQ103J

R 7060-7064,7066,7068
R 7065
R 7069,7071,7083,7084
R 7072
R 7074

RAB4CQ101J
RAB4CQ470J
RAB4CQ101J
RAB4CQ221J
RAB4CQ103J

R 7075
R 7081
R 7087-7091
Other Resistors

RAB4CQ220J
RAB4CQ222J
RAB4CQ101J
RS1/16SS###J

CAPACITORS

C 7001,7003-7011
C 7014
C 7029
C 7030
C 7031,7032

CKSRYB105K10
CKSSYB102K50
CCSSCH100D50
CCSSCH120J50
CCSSCH470J50

C 7035-7040,7043
C 7041,7044,7049
C 7045-7048,7050,7051

CKSSYB104K10
DCH1201
CKSSYB104K10

Block Name: EMMA2_MEM BLOCK(EH)**SEMICONDUCTORS**

IC 7201
IC 7203

EDD5116AFTA-5B-E
LP2995M

MISCELLANEOUS

L 7201 CHIP BEEDS FILTER

BTX1042

RESISTORS

R 7213
R 7243-7246,7257-7259
R 7247-7254,7256
R 7255,7267
R 7260,7261,7268-7270

RS1/16SS1500F
RAB4CQ101J
RAB4CQ220J
RAB4CQ103J
RAB4CQ560J

R 7262,7272-7275
Other Resistors

RAB4CQ101J
RS1/16SS###J

CAPACITORS

C 7201
C 7202-7204
C 7205,7206,7225
C 7207-7221,7223
C 7226

CKSRYB105K10
BCG1059
DCH1201
CKSSYB104K10
ACH1421

Mark No. Description**Part No.****Block Name: DP_TX BLOCK****SEMICONDUCTORS**

IC 7601
IC 7602
IC 7603

S25FL016A0LMF013
GM60028H-CG
GMT2404HR0M

MISCELLANEOUS

L 7601,7602 CHIP INDUCTOR
L 7608-7610 CHIP BEEDS FILTER
F 7601-7603 CHIP FERRITE BEADS
JA 7601 DP CONNECTOR
⚠ X 7601 CRYSTAL(27 MHz)

ATH1254
BTX1042
ATF1211
AKP1340
ASS1225

RESISTORS

R 7604
R 7645
R 7649-7657,7662
R 7658
Other Resistors

RS1/8SQ0R0J
RS1/10SR2490F
RS1/16SS10R0F
RAB4CQ0R0J
RS1/16SS###J

CAPACITORS

C 7601,7608-7614,7616
C 7602
C 7603
C 7604,7605
C 7606,7607,7617,7619

CKSSYB104K10
CKSSYB471K50
BCG1059
CCSSCH120J50
DCH1201

C 7618,7621,7624-7627
C 7620,7639
C 7629-7638,7640-7650

CKSSYB104K10
DCH1201
CKSSYB104K10

Unit Name:FUKUGO ASSY(EU MR)**MISCELLANEOUS**

3001 SCREW

BPZ26P050FTC

Unit Name: REAR IO ASSY(EU MR)**Block Name: BOARD_IF BLOCK(EU MR)****MISCELLANEOUS**

CN 8701 50P CONNECTER

AKM1399

RESISTORS

All Resistors

RS1/16SS###J

Block Name: REAR_IO_0 BLOCK(EU)**SEMICONDUCTORS**

Q 8801,8802
Q 8803
D 8801,8804
D 8803,8805

2SC4081
UMD2N
UDZS12(B)
UDZS5R1(B)

MISCELLANEOUS

⚠ F 8801 CHIP FERRITE BEADS
JA 8801 RGB CONNECTOR

ATF1229
AKP1266

RESISTORS

R 8801
R 8802
R 8803,8813
Other Resistors

RS1/8SQ151J
RS1/8SQ121J
RS1/10SR75R0F
RS1/16SS###J

CAPACITORS

C 8801
C 8802,8805-8808
C 8803
C 8804

CKSRYB105K10
CKSSYB102K50
CCSSCH680J50
CKSSYB103K16

5

6

7

8

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
C	8809,8810		CCG1205	R	8517		RAB4CQ222J
C	8811		ACH1454		Other Resistors		RS1/16SS###J
Block Name: REAR_IO_1 BLOCK(EU)				CAPACITORS			
SEMICONDUCTORS				C	8501,8510-8512		CKSRYB105K10
IC	8301		MAX3232CPW	C	8502,8509		CKSSYB104K10
Q	8301,8306		UMD2N	C	8503,8504,8513,8514		CKSSYB102K50
Q	8302-8304		2SD2114K	C	8507,8508		ACH1454
D	8301		1SS301	C	8515		CKSRYB104K16
MISCELLANEOUS				Unit Name: CI CARD ASSY(EU MR)			
JA	8301	4P PIN JACK RA	AKB1359	MISCELLANEOUS			
JA	8303	4P PIN JACK RA	AKB1358	JA	8601	PC CARD CONNECTOR	AKP1341
CN	8302	9P D-SUB SOCKET	AKP1213	CN	8601,8602	40P CONNECTER	AKM1398
RESISTORS				RESISTORS			
R	8301,8302,8305		RS1/10SR75R0F	R	8602-8605		RAB4CQ330J
R	8318,8320		RS1/10SR221J	R	8614,8615		RAB4CQ470J
R	8332		RAB4CQ101J		Other Resistors		RS1/16SS###J
	Other Resistors		RS1/16SS###J	CAPACITORS			
CAPACITORS				C	8604		CEHVAW470M16
C	8301-8303		CKSRYB105K10	C	8605		DCH1201
C	8309,8310,8313		CKSSYB471K50	Unit Name: KEY ASSY(EU MR)			
C	8311,8312		CKSSYB102K50	SEMICONDUCTORS			
C	8314,8317-8321		CKSSYB104K10	Q	9401		HN1B04FU
C	8315,8316		CCG1205	TH	9401		TH05-3H103F
Unit Name: LED ASSY(EU MR)				MISCELLANEOUS			
SEMICONDUCTORS				⚠ L	9401-9406	CHIP SOLID INDUCTOR	QTL1013
D	9401		SML-521MDW	S	9401-9406	PUSH SWITCH	CSG1155
D	9402		TLRV1022	CN	9401	L-PLUG(7P)	KM200NA7L
D	9403		SMLE12BC7T(NP)	RESISTORS			
MISCELLANEOUS				R	9407		RS1/10SR4701F
⚠ L	9408-9410	CHIP SOLID INDUCTOR	QTL1013		Other Resistors		RS1/16SS###J
CN	9402	L-PLUG(6P)	KM200NA6L	CAPACITORS			
RESISTORS				C	9409		CKSSYB103K16
	All Resistors		RS1/10SR###J	C	9410,9411		CKSSYB104K10
CAPACITORS				Unit Name: FRONT IO ASSY(EU MR)			
C	9404,9406,9407		CKSSYB103K16	SEMICONDUCTORS			
Unit Name: FRONT IO ASSY(EU MR)				IC	8501		BR24L01AFJ-W
SEMICONDUCTORS				IC	8502		TC74VHC08FTS1
IC	8501		BR24L01AFJ-W	Q	8501		DTC124EUA
IC	8502		TC74VHC08FTS1	Q	8502-8504		2SC4081
Q	8501		DTC124EUA	D	8507		1SS301
Q	8502-8504		2SC4081				
D	8507		1SS301				
D	8508		UDZS5R1(B)	MISCELLANEOUS			
MISCELLANEOUS				JA	8501	PIN JACK(3P)	AKB1303
JA	8501	PIN JACK(3P)	AKB1303	JA	8503	MINI JACK	AKN1085
JA	8503	MINI JACK	AKN1085	CN	8501	FFC CONNECTOR 26P	AKM1441
CN	8501	FFC CONNECTOR 26P	AKM1441	CN	8503	15P D-SUB SOCKET	AKP1214
CN	8503	15P D-SUB SOCKET	AKP1214	RESISTORS			
RESISTORS				R	8501,8508		RST1/2SP120J
R	8501,8508		RST1/2SP120J	R	8506,8510-8512		RS1/10SR75R0F
R	8506,8510-8512		RS1/10SR75R0F	R	8514		RAB4CQ473J
R	8514		RAB4CQ473J	R	8515,8516		RAB4CQ101J
R	8515,8516		RAB4CQ101J	KRP-M01			

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Service Manual



KRP-M01

ORDER NO.
ARP3508

MEDIA RECEIVER

KRP-M01

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
KRP-M01	WYSIXK5	AC 220 V to 240 V	
KRP-M01	WYSXJ5	AC 220 V to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
KRP-M01	ARP3509	SCHEMATIC DIAGRAM, PCB CONNECTION DIAGRAM, PCB PARTS LIST, etc.



For details, refer to "Important Check Points for good servicing".

1 2 3 4

SAFETY INFORMATION



This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

B



WARNING

This product contains certain electrical parts contain chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65



NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

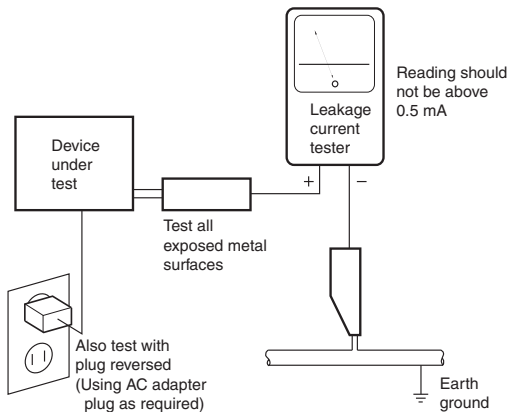
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120 V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual. The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol. Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris. Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs. In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages. If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries. Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification. Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance. Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 °C. Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

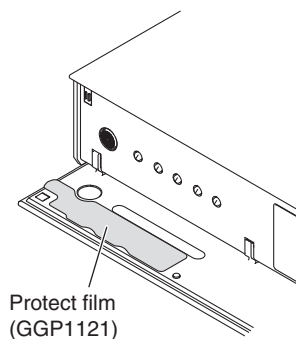
The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
GYP1006 1.0 in dia.
GYP1007 0.6 in dia.
GYP1008 0.3 in dia.

1.2 NOTES SPECIFIC TO THIS PRODUCT

1. Notes before starting repair

- The high-gloss resin parts of the exterior of this product are easily scratched. During disassembly and reassembly of this product, be careful not to scratch the exterior.
- If the door of this product is pressed firmly from the front or when the KEY Assy and LED Assy are reassembled, print of the front-panel operating section may be transferred to the inside surface of the door. To avoid this, be sure to attach the protect film to the inside surface of the door before repairing. If protect film is not available, slip a cleaning cloth or the like inside the door for protection.
- Remove the attached protect film after product installation is completed. If the repaired product is to be delivered to the customer's home or a dealer, leave the protect film attached.



2. Note on Disassembly/Reassembly

1) Fixing screws for the HDMI connector and system cable connector

For tightening the screws for the HDMI connector and system cable connector, do not use an electric screwdriver. Tighten them manually. If they are tightened too forcefully with an electric screwdriver, the screw heads may be damaged, in which case the screws cannot be loosened/tightened any more.

2. SPECIFICATIONS

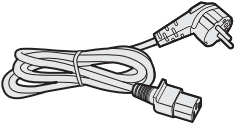
2.1 ACCESSORIES

A

• Power cable

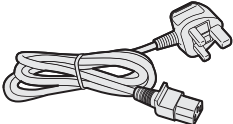
Only the power cable appropriate for your country or region is supplied:

(ADG1214)



For Europe, except UK and Republic of Ireland

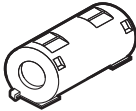
(ADG1223)




For UK and Republic of Ireland

WYSIXK5 only

• Ferrite core (ATX1039)



Ferrite core



Cable tie
(for ferrite core)

C

D

E

F

2.2 SPECIFICATIONS

Item			Media Receiver, model: KRP-M01
Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
TV Function (Analogue)	Receiving System		B/G, D/K, I, L, L'
	Tuner	VHF/UHF	E2–E69 ch, F1–F6 ch, I21–I69 ch, IR A–IR J ch
		CATV	Hyper-band, S1–S41 ch
	Auto Channel Preset		99 ch, Auto Preset, Auto Label, Auto Sort
	STEREO		NICAM/A2
TV Function (Digital)	Receiving System		DVB-T(2K/8K COFDM)
	Tuner	VHF/UHF	VHF Band III (170 MHz to 230 MHz) and UHF Band IV, V (470 MHz to 862 MHz)
		Auto Channel Preset	999 ch, Auto Preset, Auto Label, Auto Sort
	STEREO		MPEG layer I/II, Dolby Digital, Dolby Digital Plus, HE-AAC v1
TV Function (Satellite)	Receiving System		DVB-S, DVB-S2
	IF Tuner		950 MHz to 2150 MHz
	Auto Channel Preset		5000 ch, Auto Preset, Auto Label, Auto Sort
	STEREO		MPEG layer I/II, Dolby Digital, Dolby Digital Plus, HE-AAC v1
Terminals	Rear	INPUT 1	SCART (AV in, RGB in, TV out), HDMI in ^{*1}
		INPUT 2	SCART (AV in/out, S-Video in, AV link ^{*2}), Component Video in, AUDIO in
		INPUT 3	SCART (AV in/out, S-Video in, RGB in, AV link ^{*2}), HDMI in ^{*1}
		INPUT 4	HDMI in ^{*1}
		CONTROL OUT	1
		SYSTEM CABLE	1
		Antenna	75 Ω Din Type for VHF/UHF in/SAT (Satellite) in
		AUDIO OUT	AUDIO out (Fixed)
		SUB WOOFER OUT	Variable
		DIGITAL OUT	Digital audio output (Optical)
		LAN (10/100)	1
	Front	INPUT 5	Video in, HDMI in ^{*1}
		PC INPUT	Analogue RGB
		INPUT 5/PC INPUT	Audio in
		USB	USB in ^{*3}
		PHONES	16 Ω to 32 Ω recommended
		COMMON INTERFACE	2, CA Module
		Power Requirements	220 V to 240 V AC, 50 Hz/60 Hz, 52 W (0.4 W Standby)
		Weight	4.5 kg (9.9 lbs)

*1 This conforms to HDMI 1.3 (Deep Colour) and HDCP1.1. HDMI (High-Definition Multimedia Interface) is a digital interface that handles both video and audio using a single cable. HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital contents that use the Digital Visual Interface (DVI).

*2 Switchable from menu.

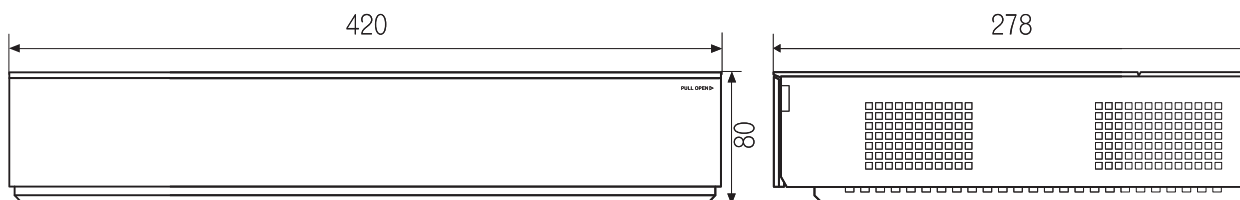
*3 This conforms to USB 1.1 and 2.0 specifications.

Design and specifications are subject to change without notice.

Dimensions (Media Receiver)

KRP-M01

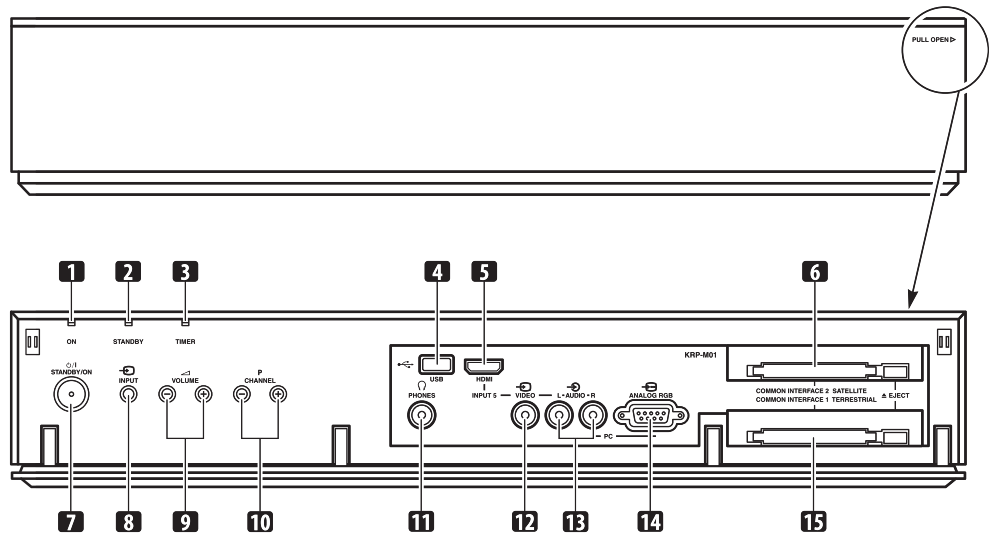
Unit: mm



KRP-M01

A

(Front)



- C

1

Power ON indicator

2

STANDBY indicator

3

TIMER indicator

4

USB port

5

INPUT 5 terminal (HDMI)

6

COMMON INTERFACE 2 SATELLITE slot

7

STANDBY/ON button

8

INPUT button
- 9

VOLUME Up/Down buttons

10

CHANNEL Up/Down buttons

11

PHONES output terminal

12

INPUT 5 terminal (Video)

13

INPUT 5/PC INPUT terminals (Audio)

14

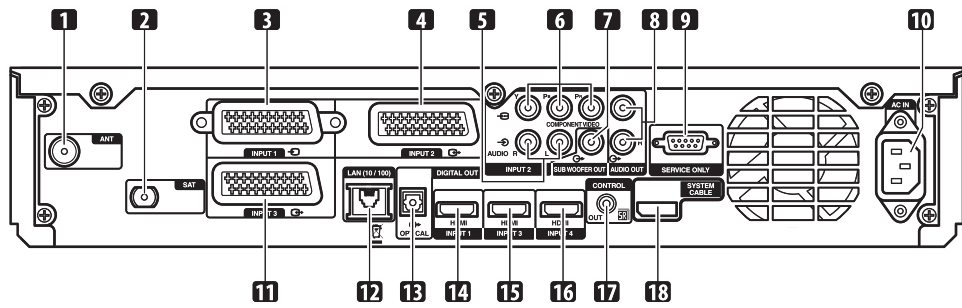
PC INPUT terminal (Analogue RGB)

15

COMMON INTERFACE 1 TERRESTRIAL slot

D

(Rear)



- E

1

ANT (Antenna) input terminal

2

SAT (Satellite) input terminal

3

INPUT 1 terminal (SCART)

4

INPUT 2 terminal (SCART)

5

INPUT 2 terminals (Audio)

6

INPUT 2 terminals (COMPONENT VIDEO: Y, P_B, P_R)

7

SUB WOOFER OUT terminal

8

AUDIO OUT terminals

9

RS-232C terminal (SERVICE ONLY)
(used for factory setup)
- 10

AC IN terminal

11

INPUT 3 terminal (SCART)

12

LAN (10/100) port

13

DIGITAL OUT terminal (OPTICAL)

14

INPUT 1 terminal (HDMI)

15

INPUT 3 terminal (HDMI)

16

INPUT 4 terminal (HDMI)

17

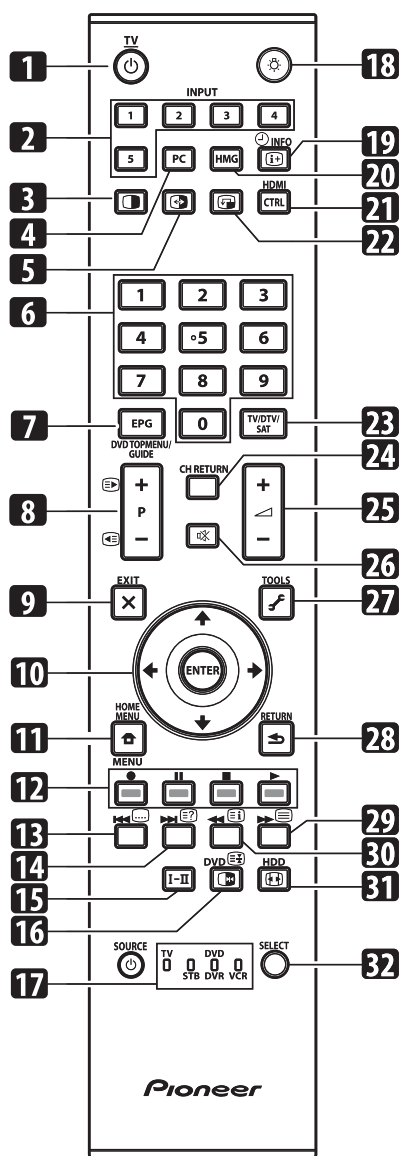
CONTROL OUT terminal

18

SYSTEM CABLE terminal

Remote Control Unit

This section describes the functions of the buttons available when the TV mode has been selected by using the **SELECT** button.



- 1 **TV** : Turns on the power to the flat screen TV or places it into the standby mode.
- 2 **INPUT**: Selects an input source of the flat screen TV. ("INPUT 1", "INPUT 2", "INPUT 3", "INPUT 4", "INPUT 5")
- 3 **PICTURE**: Switches the screen mode among 2-screen, picture-in-picture, and single-screen.
- 4 **PC**: Selects the PC terminal as an input source.
- 5 **SCREEN**: Switches between the two screens when in the 2-screen or picture-in-picture mode.

- 6 **0 to 9**: TV/External input mode: Selects a channel. Teletext mode: Selects a page. Turns the power on when the STANDBY indicator lights red.
- 7 **EPG**: Displays the Electronic Programme Guide in DTV/SAT (Satellite) input mode.
- 8 **P+/P-**: TV/External input mode: Selects a channel. **TEXT**: Teletext mode: Selects a page.
- 9 **X EXIT**: Returns to the normal screen in one step.
- 10 **UP/DOWN/LEFT/RIGHT**: Selects a desired item on the setting screen. **ENTER**: Executes a command.
- 11 **HOME MENU**: Displays the HOME MENU screen.
- 12 **Colour (RED/GREEN/YELLOW/BLUE)**: Controls a BD player for HDMI Control functions only.
- 13 **TEXT**: Jumps to Teletext subtitle page. Turns subtitle on and off in DTV input mode depending on the broadcast.
- 14 **TEXT**: Displays hidden characters.
- 15 **I-II**: Sets the sound multiplex mode.
- 16 **PAUSE**: TV/External input mode: Freezes a frame from a moving image. Press again to cancel the function. **TEXT**: Teletext mode: Stops updating Teletext pages. Press again to release the hold mode.
- 17 **TV, STB, DVD/DVR, VCR**: These indicators show the current selection and status when you control other connected equipment, using the supplied remote control unit.
- 18 **LED**: Lights up buttons. Lights turn off if no operations are performed within five seconds. This is used for remote control use in dark locations.
- 19 **INFO**: Displays the channel information. Displays the banner information.
- 20 **HMG (Home Media Gallery)**: Displays the Home Media Gallery screen.
- 21 **HDMI CTRL**: Displays the HDMI Control menu.
- 22 **PICTURE**: Moves the location of the small screen when in the picture-in-picture mode.
- 23 **TV/DTV/SAT**: Switches the mode among TV, DTV and SAT.
- 24 **CH RETURN**: Returns to the previous channel.
- 25 **VOLUME**: Sets the volume.
- 26 **MUTE**: Mutes the sound.
- 27 **TOOLS**: Displays the TOOLS Menu.
- 28 **RETURN**: Restores the previous menu screen.
- 29 **TEXT**: Selects the Teletext mode (all TV image, all TEXT image, TV/TEXT image).
- 30 **TEXT**: Displays an Index page for the CEEFAX/FLOF format. Displays a TOP Over View page for the TOP format.
- 31 **SCREEN**: Selects the screen size.
- 32 **SELECT**: Switches the selection among TV, STB, DVD/DVR, and VCR, so that you can control other connected equipment, using the supplied remote control unit.

Note

- When using the remote control unit, point it at the display panel.

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

A Items to be checked after repair (PDP)

To ensure the quality of the product after repair, check the recommended items shown below:

No.	Procedures	Item to be checked
1	Check if all the symptoms pointed out by the customer have been addressed.	The symptoms in question must not be reproduced.
2	Connect the peripheral equipment.	Connect all external peripheral equipment as originally connected and check if the connections are correct.
3	Check the video and audio.	Tune in to the stations that the customer would normally receive and check if video and audio are normal.
4	Check the buttons and controls.	Use the buttons and controls on the remote control unit and main unit and check if they operate properly.
5	Check the cabinet.	Check for any scratches or dirt that have been made or attached on the cabinet after receiving the product for repair.

See the table below for the items to be checked regarding video and audio:

Item to be checked regarding video	Item to be checked regarding audio
Block noise	Distortion
Horizontal noise	Noise
Dot noise	Volume too low
Disturbed image (video jumpiness)	Volume too high
Too dark	Volume fluctuating
Too bright	Sound interrupted
Mottled color	

D Cleaning



Name	Part No.	Remarks
Cleaning paper	GED-008	Used to fan cleaning. Refer to “9.3 BOTTOM SECTION.”

3.2 QUICK REFERENCE

Quick Reference upon Service Visit ① Notes, PD/SD diagnosis, and methods for various settings

Notes when visiting for service

1. Notes when disassembling/reassembling

① Rear case

When reassembling the rear case, the screws must be tightened in a specific order. Be careful not to tighten them in the wrong order forcibly. For details, see "Rear Case" in "7. DISASSEMBLY".

② Attaching screws for the HDMI and system cable terminals

When attaching the HDMI and system cable terminals after replacing the Assembly, secure the terminals manually with a screwdriver, but not with an electric screwdriver. If you tighten the screws too tightly with an electric screwdriver, the screw heads may be damaged, in which case the screws cannot be untightened/tightened any more.

2. On parts replacement

① How to discharge before replacing the Assys

A charge of significant voltage remains in the Plasma Panel even after the power is turned off. Safely discharge the panel before replacement of parts, in either manner indicated below:

A: Let the panel sit at least for 3 minutes after the power is turned off.
B: Turn the Large Signal System off before the power is turned off then, after 1 minute, turn the power off.

For details, see "5.6 [1] PANEL DRIVE-POWER ON/OFF FUNCTION".

② On the settings after replacement of the Assys

Some boards need settings made after replacement of the Assys. For details, see "8. EACH SETTING AND ADJUSTMENT".

3. On various settings

① Setting in Factory mode

After a Mask indication into the panel is performed, be sure to set the Mask setting to "OFF" then exit Factory mode.

PD		SD	
No. of LEDs flashing	MR	Panel	No. of LEDs flashing
Red 1	MR_POWER	SQ_LSI	Blue 1
	Panel	Module Device communication	Blue 2
Red 2	POWER	DIGITAL-RST2	Blue 3
Red 3	SCAN	Panel temperature	Blue 4
Red 4	SCN-5V	Audio	Blue 5
Red 6	Y-DCDC	Module microcomputer communication	Blue 6
Red 7	Y-SUS		Blue 7
Red 8	ADRS		Blue 8
Red 10	X-DCDC	Panel main IIC communication	Blue 9
Red 11	X-SUS		Blue 10
Red 12	DIG-DCDC	FAN	Blue 11
Red 15	UNKNOWN	Unit high temperature	Blue 12
			Blue 13
		DC-IN	Blue 14
		Panel main EEPROM	Blue 15
			Blue 15

Special LED Patterns		Subcategory confirmation procedure	
Panel	MR	SD	SD Subcategory
PD (2-15) 	PD (1) 	If the DISPLAY key is pressed during shutdown, the orange LED flashes. (MR only)	
SD (1-15) 	SD (7-15) 		
System failure 	Standalone operation (MRMS01) 	8	1 Tuner 1
MR on standby (Red LED lit)	Rewriting of software (PC) 		2 MSP/MAP
Rewriting of software (PC) 	Rewriting of software (USB) 		3 AV Switch
NO BACKUP	After rewriting is completed successfully, the orange LED goes dark.		4 RGB Switch
	Rewriting of software failed (USB) 		5 Main VDEC
			6 VDEC-SDRAM
			7 AD/PLL
			8 HDMI
		9 Display Port Tx	
		13	1 RST2
			2 RST4
Commands for shifting between standalone and system operations		Other SD main categories have subcategories. For details, see 5.4[2].	
Panel	MR		
To Standalone operation: SYSS00	To Standalone operation: MRMS01		
To System operation: SYSS01	To System operation: MRMS00		
Note: After issuing a command, unplug then again plug in the AC power cord.			

How to locate several items on the Factory menu

{ } : Item on the Factory menu
[] : Key on the remote control unit
" " : Screen indication

1. Confirmation of accumulated power-on time and power-on count

Select {INFORMATION} then {HOUR METER}.
(After entering Factory mode, press [↓] four times.)

2. Confirmation of the Power-down and Shutdown histories

① Panel system

PD: Select {PANEL FACTORY} then {POWER DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] two times.)

SD: Select {PANEL FACTORY} then {SHUT DOWN}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] three times.)

② MR section

Select {INFORMATION} then {MAIN NG}.
(After entering Factory mode, press [↓] two times.)

③ Panel main section

Select {PANEL MAIN FACTORY} then {PM NG INFO}.
After entering Factory mode, press [MUTING] twice, then press [ENTER/SET].

3. How to display the Mask indication

① Mask indication in the panel side

- Select {PANEL FACTORY} then {RASTER MASK SETUP}.
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] 8 times.)
- Press [ENTER/SET], then select a Mask indication, using [↑] or [↓].

Adjustments and Settings after replacement of the Assys (Procedures in Factory mode)

1. DIGITAL Assy (Panel): Transfer of backup data

- Select {PANEL FACTORY}, {ETC}, then {BACKUP DATA}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [↓] seven times, then press [ENTER/SET].)
- Select {TRANSFER}, using [→], then hold [ENTER/SET] pressed for at least 5 seconds.
- After transfer of backup data is completed, {ETC} is automatically selected, and the LED on the front panel returns to normal lighting.

2. MAIN BLOCK Assy (MR), MAIN Assy (Panel): Execution of FINAL SETUP.

- Select {INITIALIZE} then {FINAL SETUP}, then press [ENTER/SET]. (After entering Factory mode, press [MUTING] three times, then press [↓] four times.)
- Select "YES", using [→]. Then hold [ENTER/SET] pressed for at least 5 seconds.
- After "FINAL SETUP IS COMPLETE" is displayed on the screen, turn the POWER switch of the main unit off.

3. POWER SUPPLY Unit (Panel): Clearance of the accumulated power-on count and maximum temperature value

- Select {PANEL FACTORY}, {ETC}, then {P COUNT INFO}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [↓] seven times, press [ENTER/SET], then press [↓] six times.)
- Press [→] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected. Clear the maximum temperature value (MAX TEMP) in the same manner.

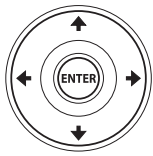
4. Other Assys (Panel): Clearance of the maximum temperature value

- Select {PANEL FACTORY}, {ETC}, then {MAX TEMP}. (After entering Factory mode, press [MUTING] once, press [ENTER], press [↓] seven times, press [ENTER/SET], then press [↓] seven times.)
- Press [→] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected.

Quick Reference upon Service Visit ②

Mode transition and structure of layers in Service Factory mode

Mode transition in Service Factory mode



Up
↓
Down

- To shift to another mode, press [MUTING].
- To shift to another item in a specific mode, press [↑] or [↓].
- To shift to the next nested layer below for an item with a "(+)" indication, press [ENTER/SET]. To return to the next nested layer above, also press [ENTER/SET].

INFORMATION mode

1. VERSION (1)
2. VERSION (2)
3. VERSION (3)
4. MAIN NG
5. TEMPERATURE
6. HOUR METER
7. HDMI SIGNAL INFO 1
8. HDMI SIGNAL INFO 2
9. VDEC SIGNAL INFO 1
10. VDEC SIGNAL INFO 2



INITIALIZE mode

1. SIDE MASK LEVEL
2. FINAL SETUP
3. DTB SERVICE MENU
4. Wide XGA AUTO
5. AUTO ADJUSTMENT



OPTION mode

1. CH PRESET
2. Digital AFT
3. SYNC DET
4. CTI



PANEL MAIN FACTORY mode

1. PM NG INFO
2. PM STATE INFO.
3. DP_RX INFO.
4. PM_SETUP



PANEL FACTORY mode

1. PANEL INFORMATION
2. PANEL WORKS
3. POWER DOWN
4. SHUT DOWN
5. PANEL-1 ADJ
6. PANEL-2 ADJ
7. PANEL FUNCTION
8. ETC.
9. RASTER MASK SETUP
10. PATTEN MASK SETUP
11. COMBI MASK SETUP

Structure of Layers in Service Factory Mode

INFORMATION mode

- 1. VERSION (1)
- 2. VERSION (2)
- 3. VERSION (3)
- 4. MAIN NG
 - 4-1. CLEAR
- 5. TEMPERATURE
- 6. HOUR METER
- 7. HDMI SIGNAL INFO 1
- 8. HDMI SIGNAL INFO 2
- 9. VDEC SIGNAL INFO 1
- 10. VDEC SIGNAL INFO 2

The software versions for each microcomputer
The Flash memory versions for each device
The software versions for display microcomputer
The shutdown message ID/event times
(Going Clear mode by [ENTER/SET] key)
Select Yes by [→] key → pushing and hold [ENTER/SET] key
The temperature/FAN rotating status
The HOUR METER/P-COUNT information
The information of HDMI information files
The information of HDMI information files
The signal information of VDEC
The signal information of VDEC

PANEL FACTORY mode

Refer to [PANEL FACTORY MODE]

PANEL MAIN FACTORY mode

- 1. PM NG INFO.
- 2. PM STATE INFO.
- 3. DP_RX INFO.
- 4. PM_SETUP

Shutdown history of the panel main
The temperature/FAN rotating status/Room Light Sensor
Indication of the DPRx ID
Select the bezel color and clear the shutdown history of the panel main

OPTION mode

- 1. CH PRESET
- 2. Digital AFT
- 3. SYNC DET
- 4. CTI

For production line use
For production line use
For technical analysis
For technical analysis

INITIALIZE mode

- 1. SIDE MASK LEVEL
 - 1-1. SIDE MASK LEVEL
- 2. FINAL SETUP
 - 2-1. DATA RESET
 - 3-1. MODE SHIFT
- 4. Wide XGA AUTO
- 5. AUTO ADJUSTMENT

For factory use
Set to Factory default settings (it should perform after replacing a MAIN Assy)
Information for the Digital Tuner Service Menu is displayed
For technical analysis

Structure of Layers in Panel Factory Mode 1

1. PANEL INFORMATION
2. PANEL WORKS
3. POWER DOWN
4. SHUT DOWN
5. PANEL-1 ADJ (+)
 1. VOL SUS
 2. VOL OFFSET
 -
 10. RESET1ST_KSB
 -
 25. SUS FREQ
6. PANEL-2 ADJ (+)
 1. R-HIGH
 2. G-HIGH
 -
 6. B-LOW
 7. ABL
7. PANEL FUNCTION (+)
 1. R-LEVEL
 -

Version indication of the panel
Indications of the accumulated power-on time and power-on count of the panel
Indication of the Power-down history
Indication of the Shutdown history

Settings required after replacement of the panel

Items for factory use

For AM noise prevention (Depending on the mode, brightness of the screen changes.)
For confirmation of the result of the setting change, the unit must be turned off then back on again.

For the WB adjustment of the panel and ABL adjustment.
A setting table is available for each signal frequency.

Items for factory use

To "Structure of Layers in Panel Factory Mode 2"

Structure of Layers in Panel Factory Mode 2

8. ETC (+)
 1. BACKUP DATA
 2. DIGITAL EEPROM
 3. PD INFO.
 4. SD INFO.
 5. HR-MTR INFO.
 6. PM/B1-B5
 7. P COUNT INFO.
 8. MAX TEMP.
 9. MIRROR
 10. CLS
9. RASTER MASK SETUP (+)
 1. MASK OFF
 2. RST MASK 01
 -
10. PATTERN MASK SETUP (+)
 1. MASK OFF
 2. PTN MASK 01
 -
11. COMBI MASK SETUP (+)
 1. MASK OFF
 2. CMB MASK 01
 -

For transferring backup data (after replacement of the DIGITAL Assy)
Change the adjustment status of the DIGITAL Assy.

For clearance of data for the corresponding items.
The clearing method is the same: Select "CLEAR", then hold [ENTER/SET] pressed for at least 5 seconds.

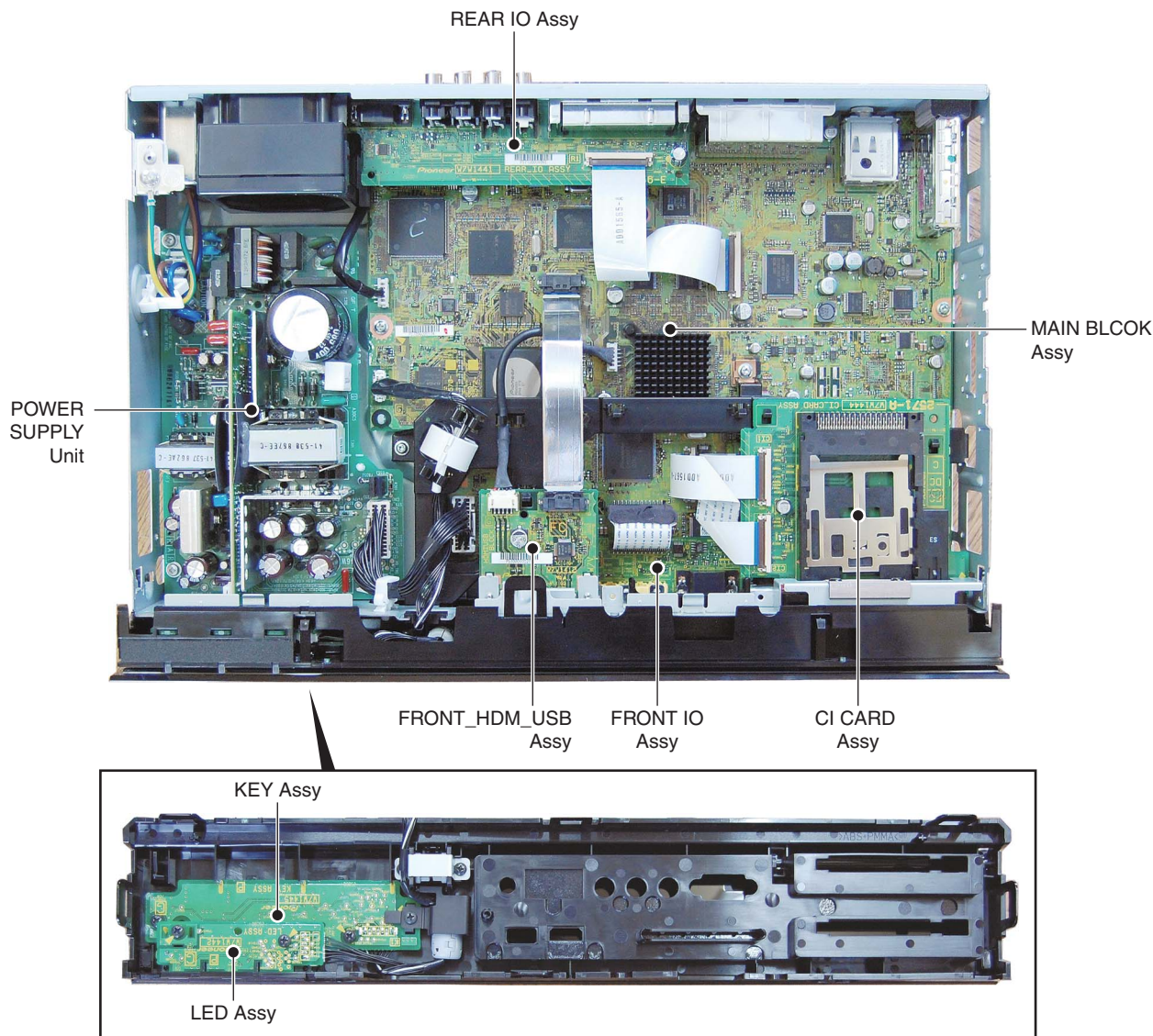
Switch the Mirror display mode.
Switch the function when checking the color sensor level.

For use while the Raster Mask is displayed.
Use [↑] or [↓] to select the type of mask.
Use [→] or [←] to select the sequence.

For use while the Pattern Mask is displayed.
Use [↑] or [↓] to select the type of mask.
Use [→] or [←] to select the sequence.

For use while the Combination Mask is displayed.
Use [↑] or [↓] to select the type of mask.
Use [→] or [←] to select the sequence.

Note: The wiring shown in the photo is different from the actual wiring, because the product in the photo is a prototype. Upon servicing, be sure to restore the original wiring of the unit after repair work.



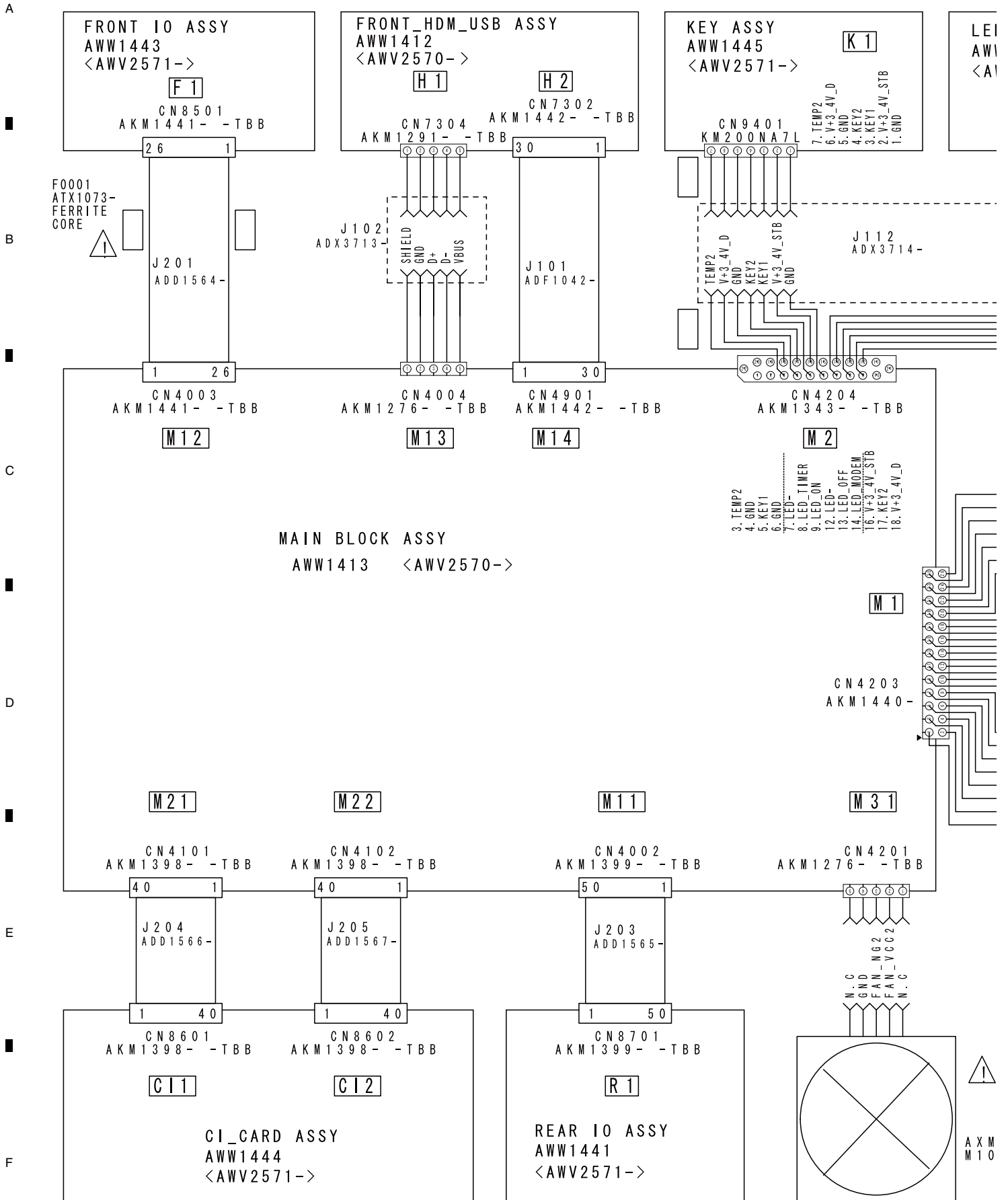
NOTES:

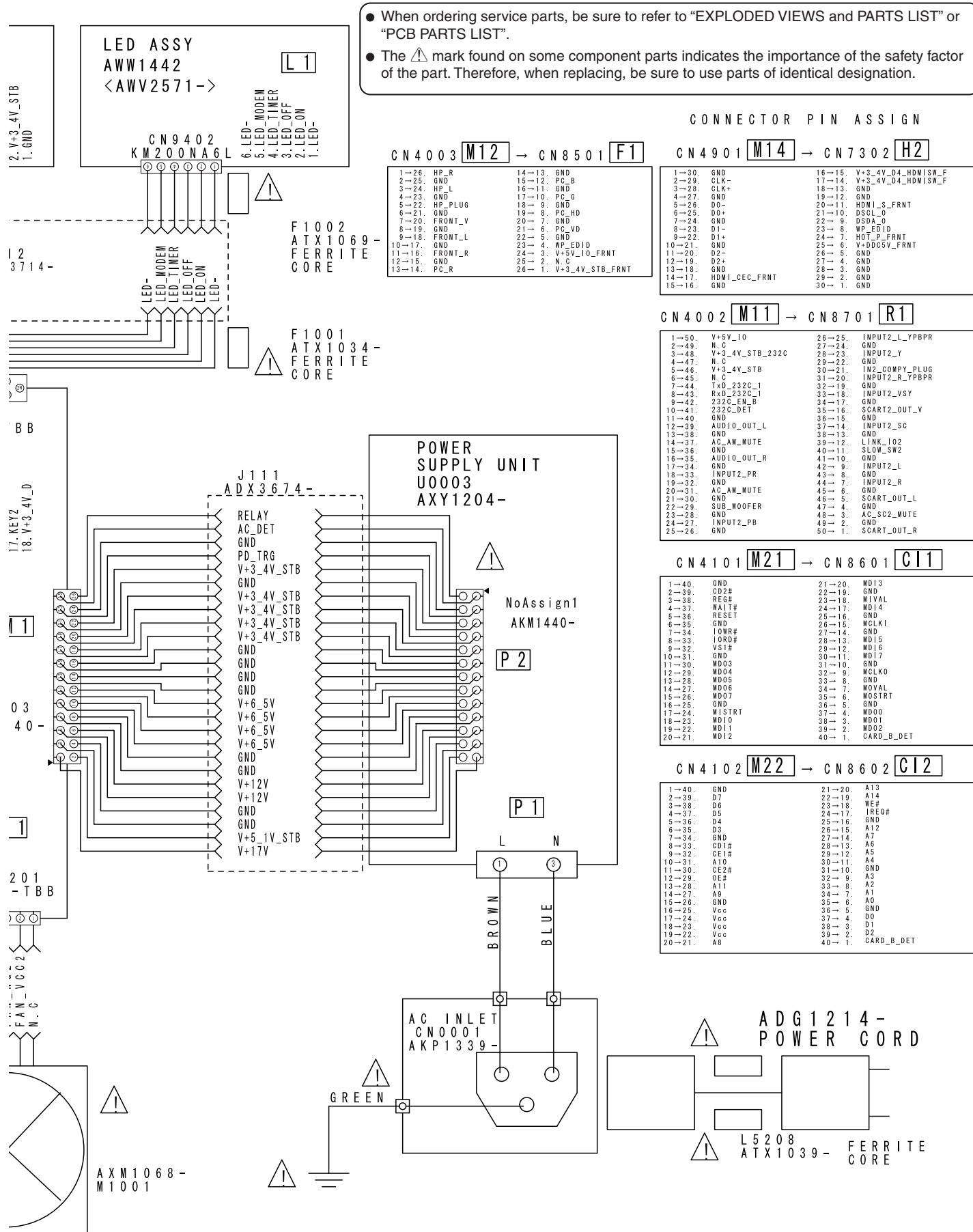
- Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Mark No.	Description	Part No.	Mark No.	Description	Part No.
LIST OF ASSEMBLIES					
NSP	1..MAIN ASSY	AWV2570	NSP	1..FUKUGO ASSY	AWV2571
	2..FRONT_HDM_USB ASSY	AWW1412		2..REAR IO ASSY	AWW1441
	2..MAIN BLOCK ASSY	AWW1413		2..LED ASSY	AWW1442
				2..FRONT IO ASSY	AWW1443
				2..CI CARD ASSY	AWW1444
				2..KEY ASSY	AWW1445
			⚠	1..POWER SUPPLY UNIT	AXY1204

4. BLOCK DIAGRAM

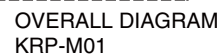
4.1 OVERALL WIRING DIAGRAM





16





A

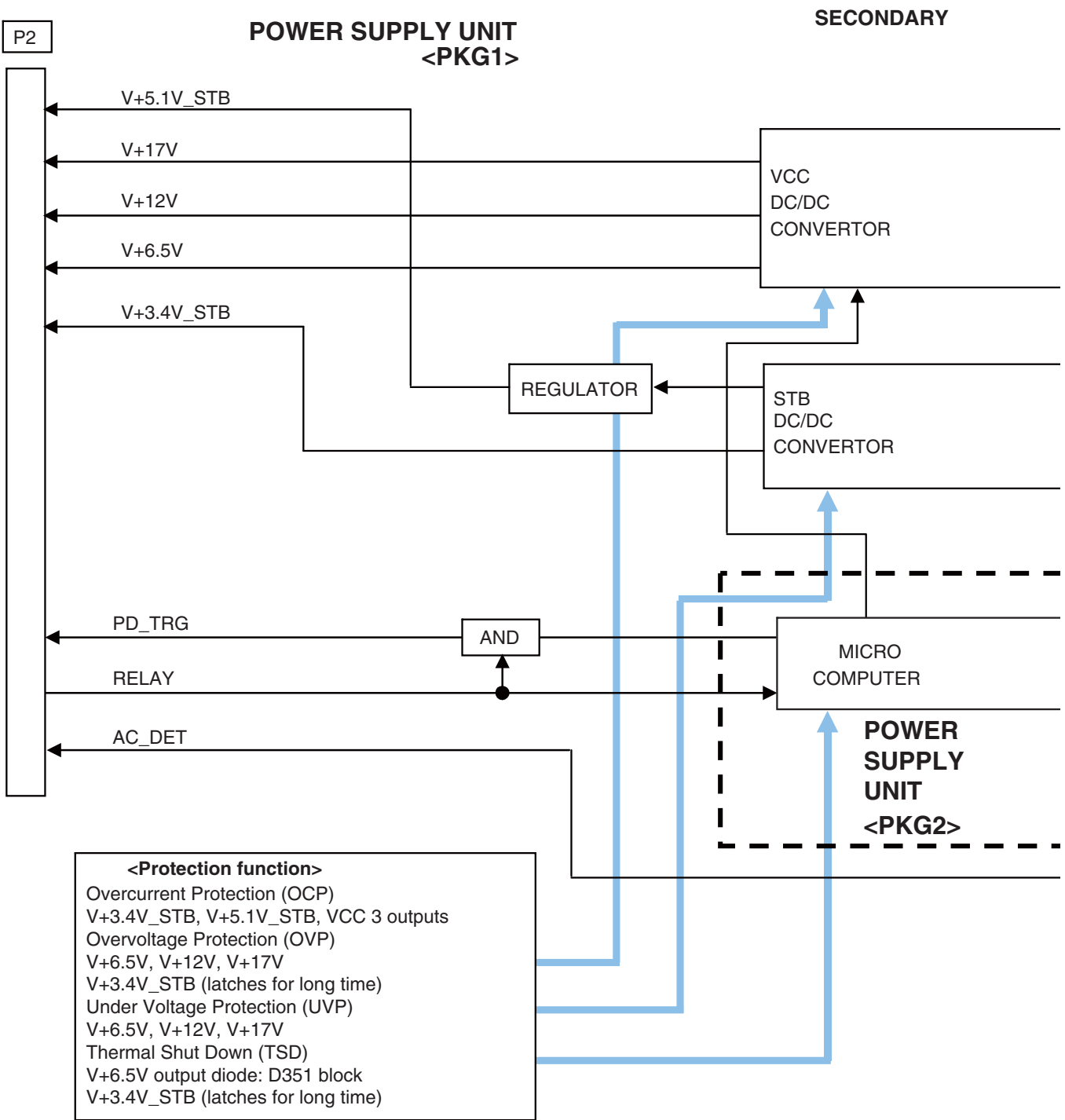
B

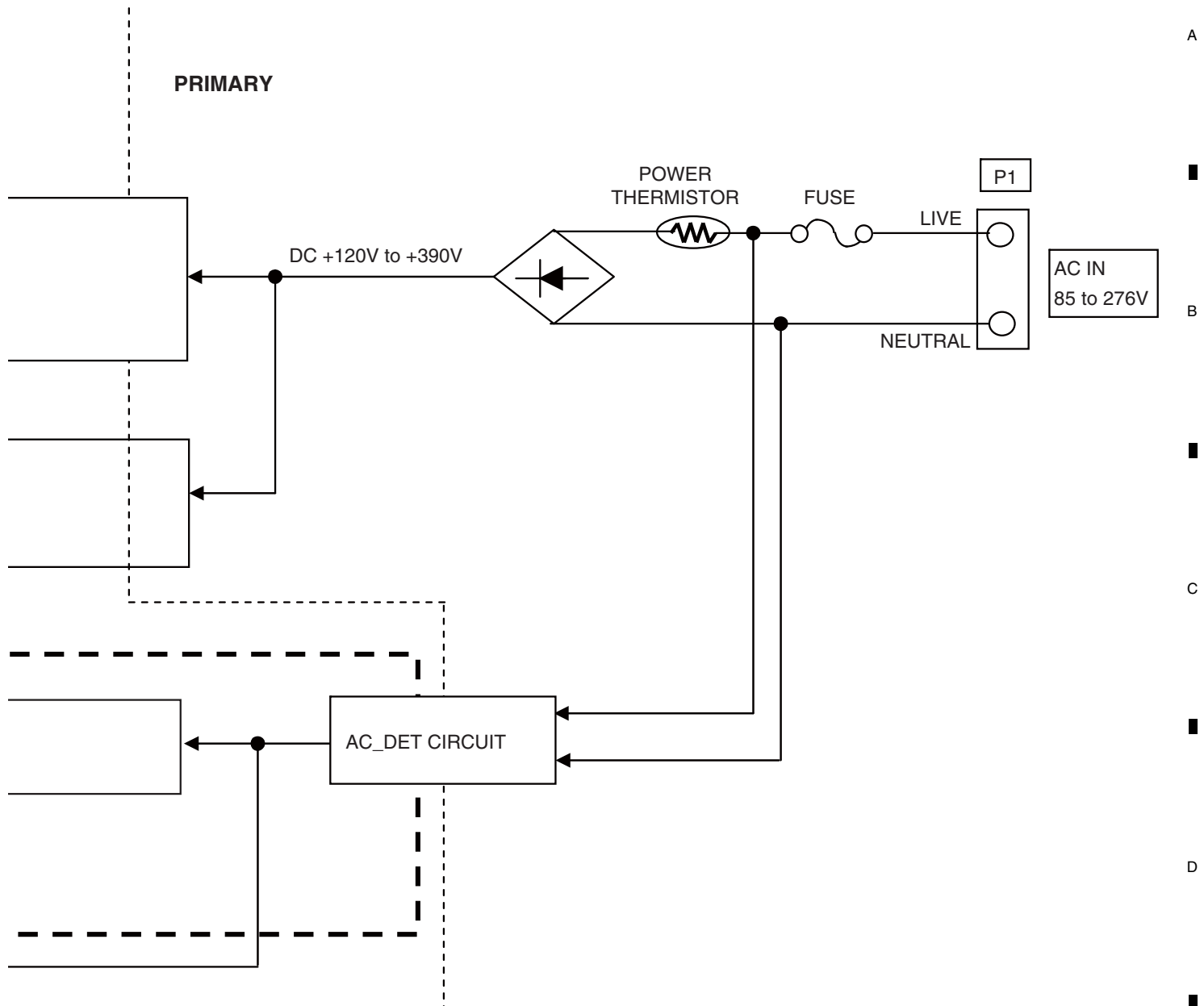
C

D

E

F





Logic Signal Specifications

[Logic level] H: STB3.4 V × (0.8 to 1.1), L: ≤ STB3.4 V × 0.2

Signal Name	I/O	Function	Logic		Description
RELAY	IN	Relay ON/OFF	H	ON	For controlling ON/OFF of all output signals other than STB signals
			L	OFF	
			Open	OFF	
PD_TRG	OUT	Determination of abnormality inside the POWER SUPPLY Unit	H	Determination of abnormality	For sending a deterministic signal when an abnormality is generated inside the POWER SUPPLY Unit to shut off any output signals other than STB signals
			L	Normal	
AC_DET	OUT	AC detection	H	Present	For detecting the presence of the AC input voltage, regardless of ON/OFF of STB 3.4 V output
			L	Absent	

4.4 POWER SUPPLY BLOCK of MAIN BLOCK ASSY

A

B

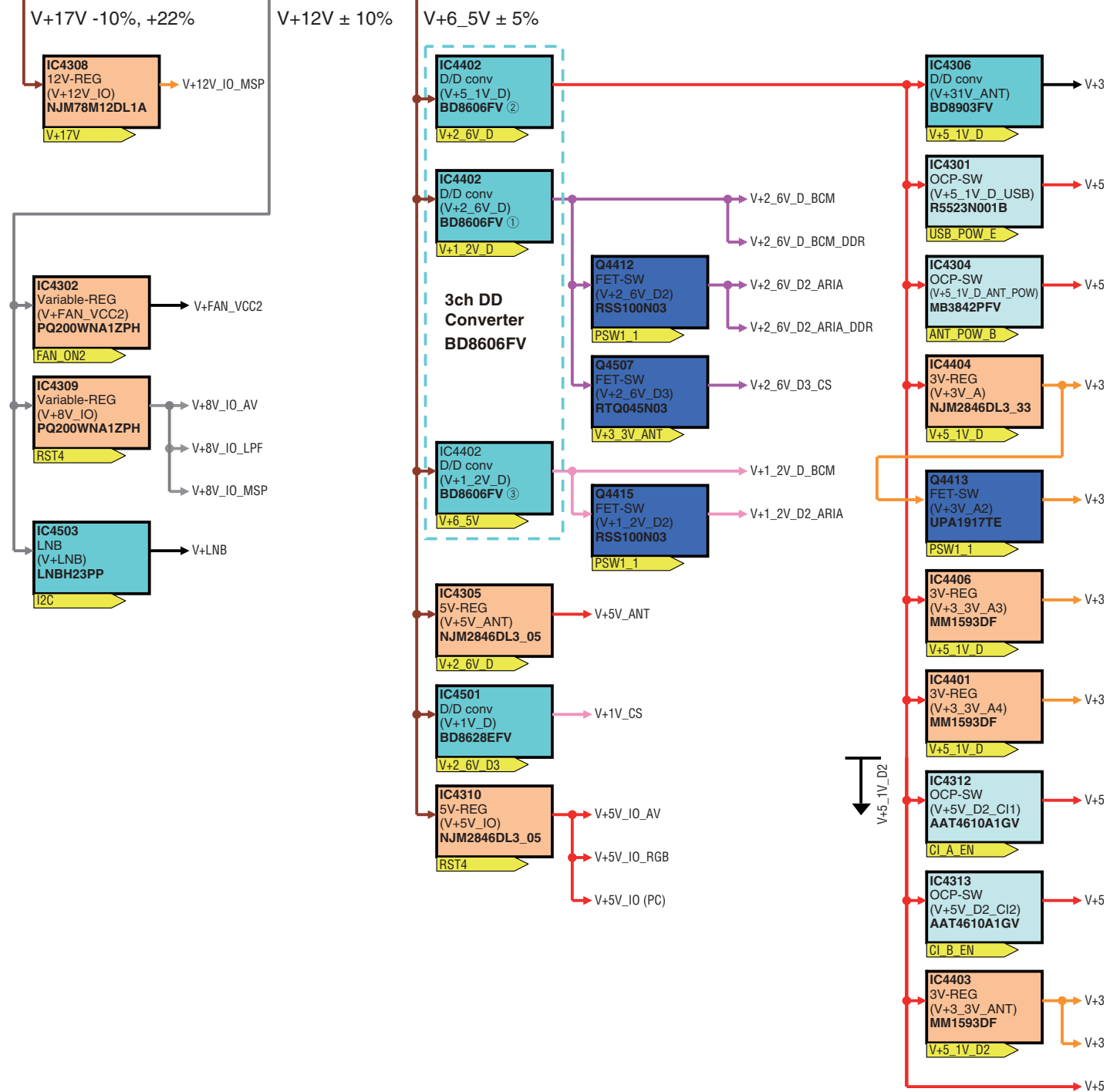
C

D

E

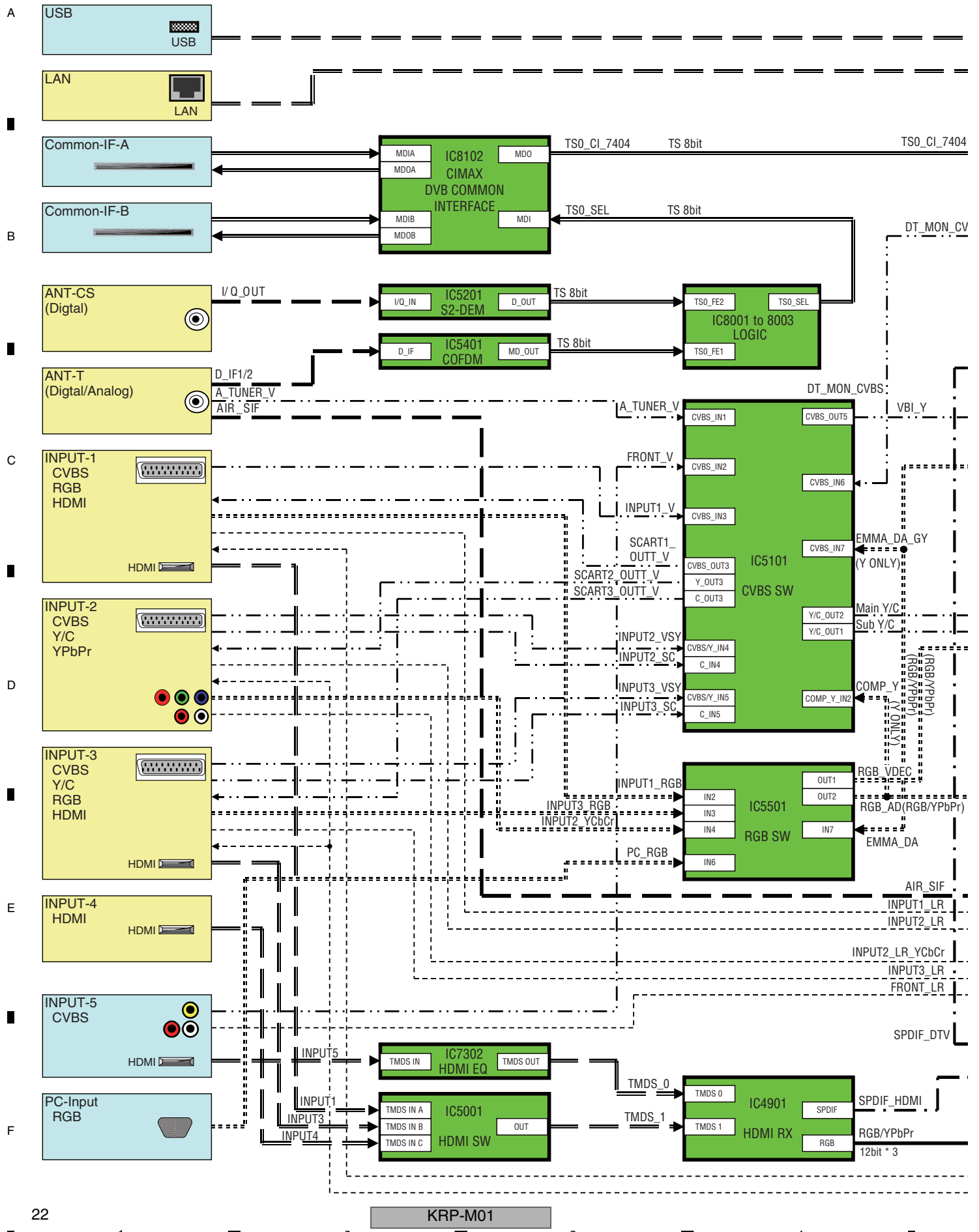
F

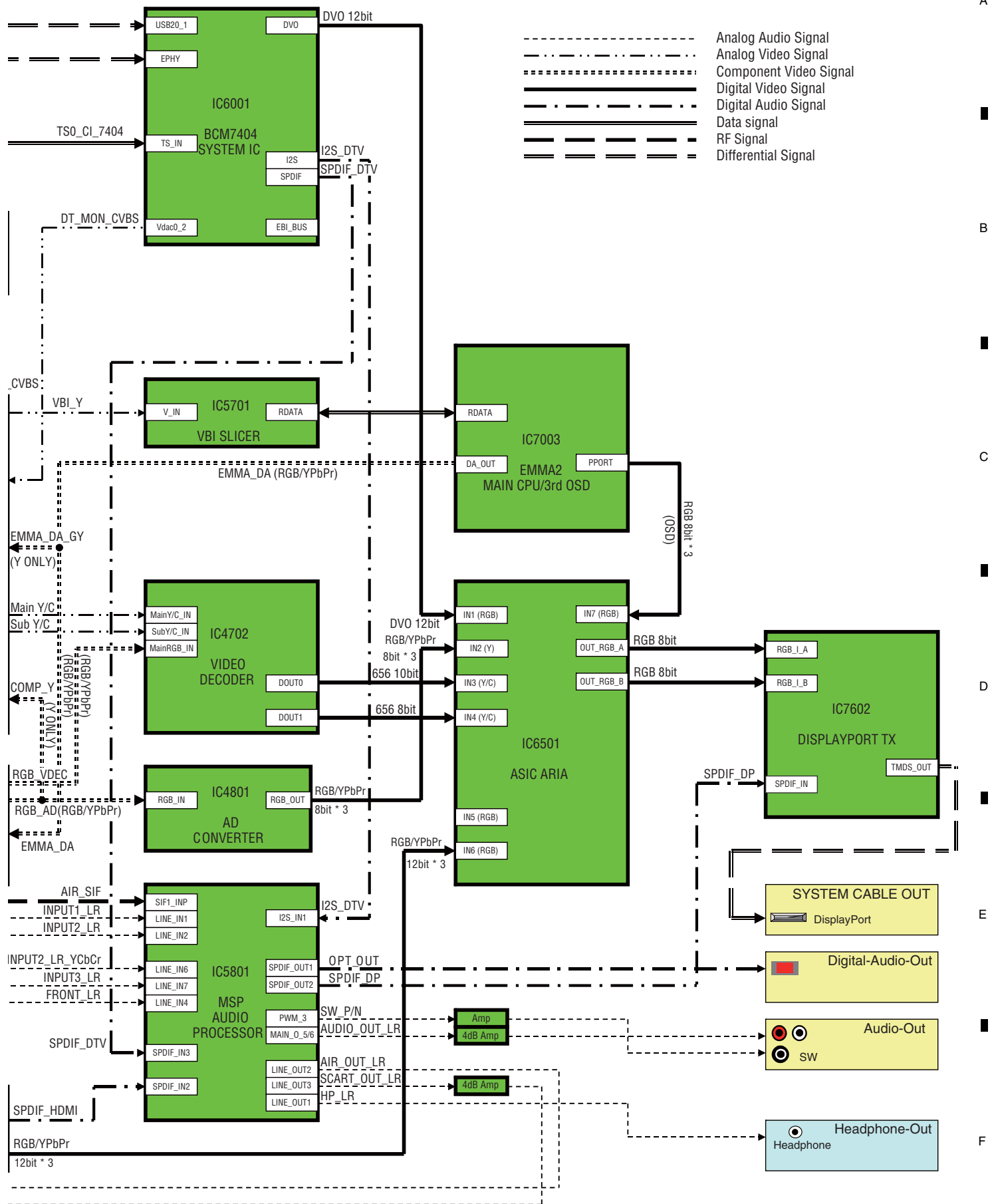
SW REG CONTROLLED BY RELAY





4.5 AV BLOCK





5. DIAGNOSIS

5.1 POWER SUPPLY OPERATION

[1] LED DISPLAY INFORMATION

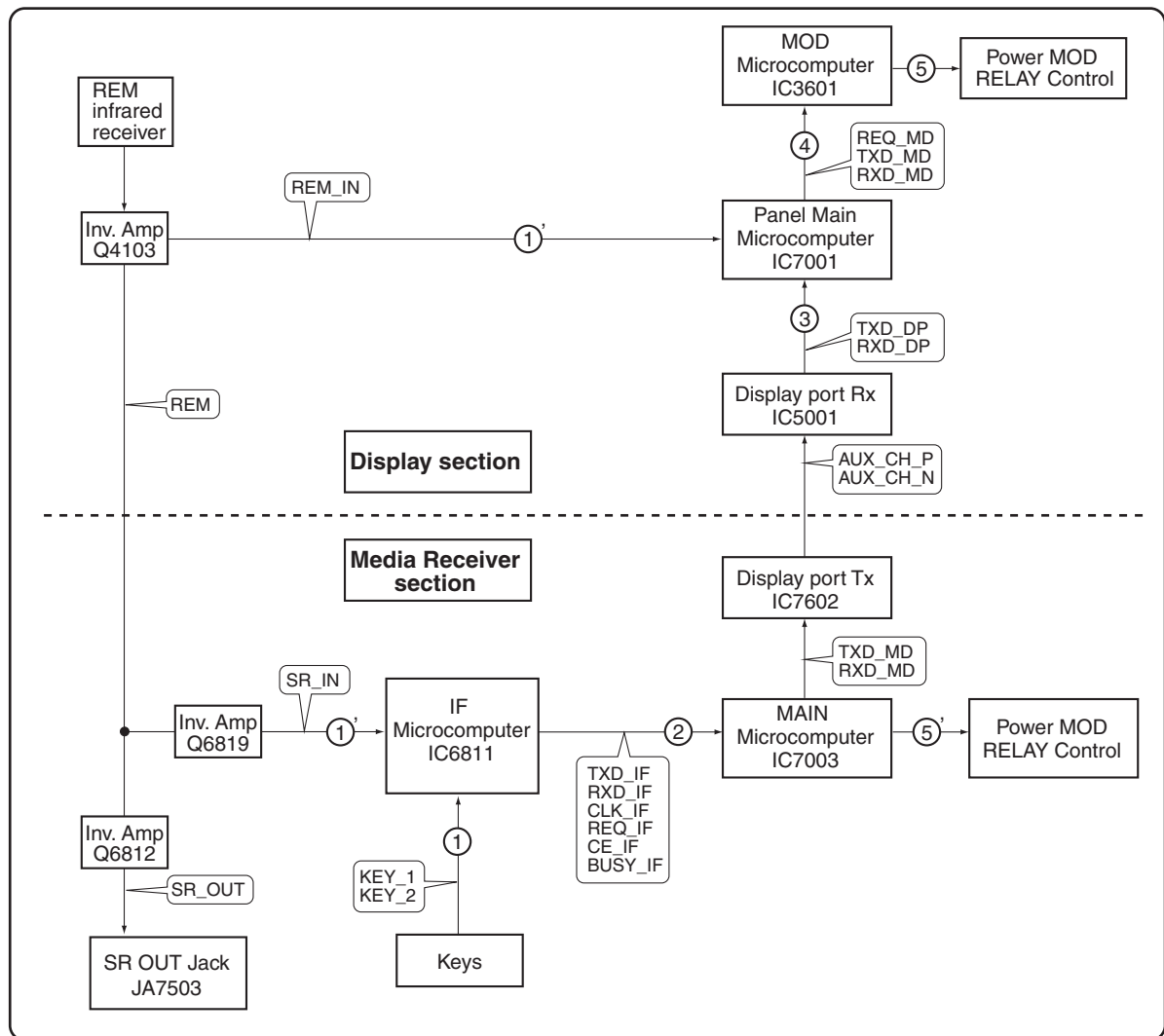
LED Pattern

Status	LED	LED Pattern / Remarks			
Standby Power Management	Blue Red Orange				
Power On	Blue Red Orange				
Power-Down	Blue Red Orange	Once 500ms	Twice	n times 2.5s	Once *1
Shutdown	Blue Red Orange	500ms Once	Twice	n times 2.5s	Once *2
Shutdown (Subcategory flashing)	Blue Red Orange	500ms Once 500ms	Twice	n times 2.5s	Once *2 *3
No digital adjustment data copied for backup	Blue Red Orange	200ms			
Updating the PC	Blue Red Orange	100ms			
During factory operation	Blue Red Orange				
During DTB communication inhibit	Blue Red Orange	100ms			
During USB update	Blue Red Orange	100ms			
Updating of USB is finished normally.	Blue Red Orange	100ms			
Updating of USB is abnormally finished.	Blue Red Orange	100ms 100ms 500ms	Once Twice	500ms n times 2.5s	500ms *4
Power ON of standalone mode (Screen ON)	Blue Red Orange	1000msec	1000msec	1000msec	
Mode switch of system / standalone operation	Blue Red Orange	200ms			
Sleep timer	Blue Red Orange				
During reservation video recording (Unit: Standby)	Blue Red Orange				
During reservation video recording (Unit: ON)	Blue Red Orange				



- *1: Notify upon the power-down content by Red LED flashing number of times.
*2: Notify upon the shutdown content by Blue LED flashing number of times
*3: Notify upon the subcategory number by Orange LED flashing number of times.
*4: Notify upon the abnormal state by Orange LED flashing number of times.

[2] POWER ON SEQUENCE



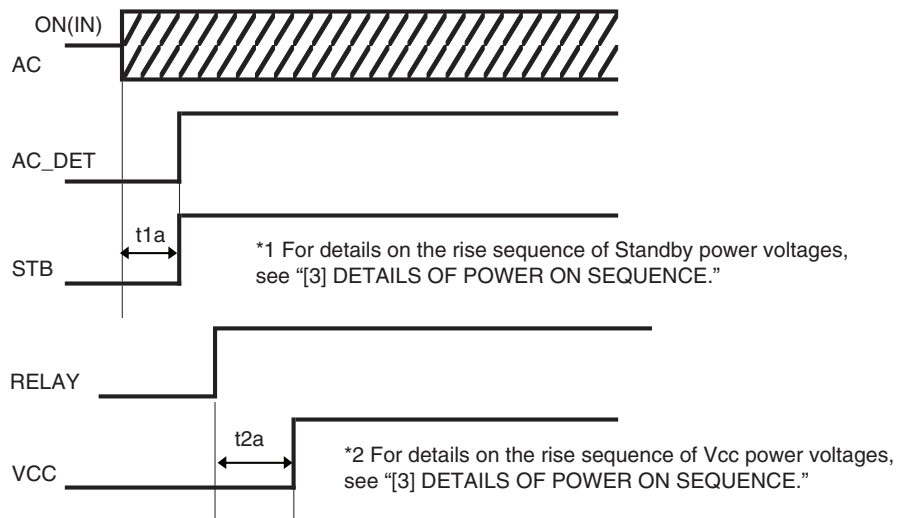
- ① : The KEY signal is input to the IF microcomputer.
- ①' : The remote control signal is input to the IF microcomputer and Panel main microcomputer.
- ② : The IF microcomputer sends the operation data of the remote control unit key to the main microcomputer.
- ③ : The main microcomputer issues a startup command (PON) to the panel main microcomputer through DP Tx and DP Rx.
- ④ : The panel main microcomputer issues a startup command (PON) to the MOD microcomputer.
- ⑤ : The MOD microcomputer controls a MOD relay of the POWER SUPPLY Unit (Display section), then the power is turned on.
- ⑤' : The main microcomputer controls a MOD relay of the POWER SUPPLY Unit (Media Receiver section), then the power is turned on.

A

■ OUTLINE OF POWER ON SEQUENCE

The rise of the output voltage is defined as the point at which 10% output voltage is reached, and the fall is defined as the output supply stop point.

■ Sequence of AC ON (IN)



(a) Relay signal: When the POWER key on the remote control unit is pressed after that on the unit is set to ON

AC ON	
Item	Specified Time
AC to STB	$t_{1a} \leq 0.8s$
RELAY to VCC	$t_{2a} \leq 0.5s$

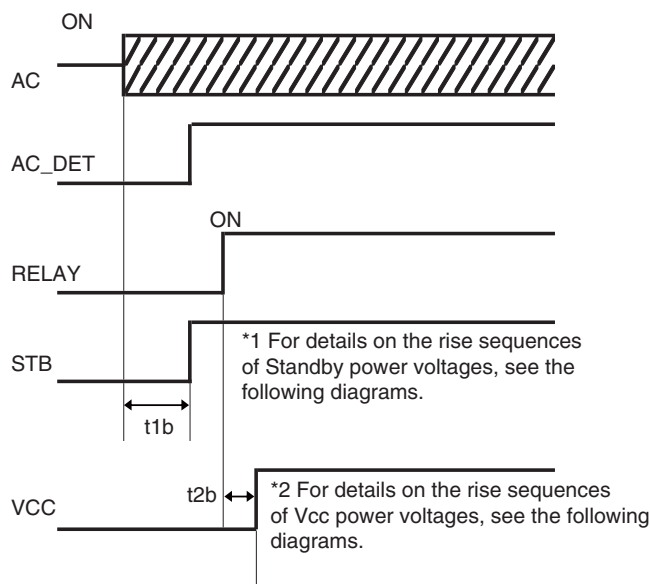
(b) Relay signal: When the POWER key on the remote control unit is pressed while the unit is OFF (in Standby mode)

AC ON	
Item	Specified Time
AC to STB	$t_{1a} \leq 0.8s$
Relay to VCC	t_{2a} No specification

[3] DETAILS OF POWER ON SEQUENCE

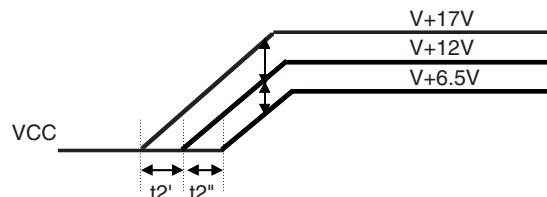
The rise of the output voltage is defined as the point at which 10% output voltage is reached.

1. Sequence of Relay ON (IN)



Relay ON	
Item	Specified Time
AC to STB	$t1b \leq 0.8s$
RELAY to VCC	$t2b \leq 0.5s$

3. Rise sequences of Vcc power voltages



<Specified time of voltages>

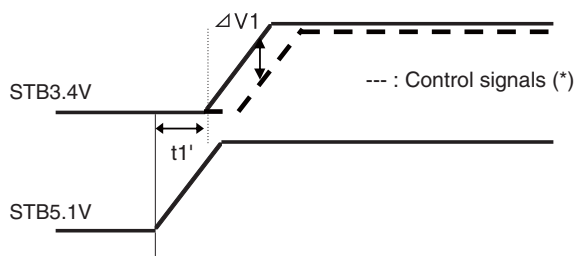
Rise	
Item	Specified time (at nominal load)
V+17V to V+12V	$0ms \leq t2' \leq 10ms$
V+12V to V+6.5V	$0ms \leq t2'' \leq 10ms$

4. Specifications of the rise time of the output voltages (common to all sequences)

Note that there must not be any temporary voltage drop during rising.

Rise time (time required for reaching from 10% to 90% output voltage)	
Item	Specified time
STB 10% to STB 90%	$tr_STB \leq 100ms$
VCC 10% to VCC 90%	$tr_VCC \leq 200ms$

2. Rise sequence of Standby power voltages



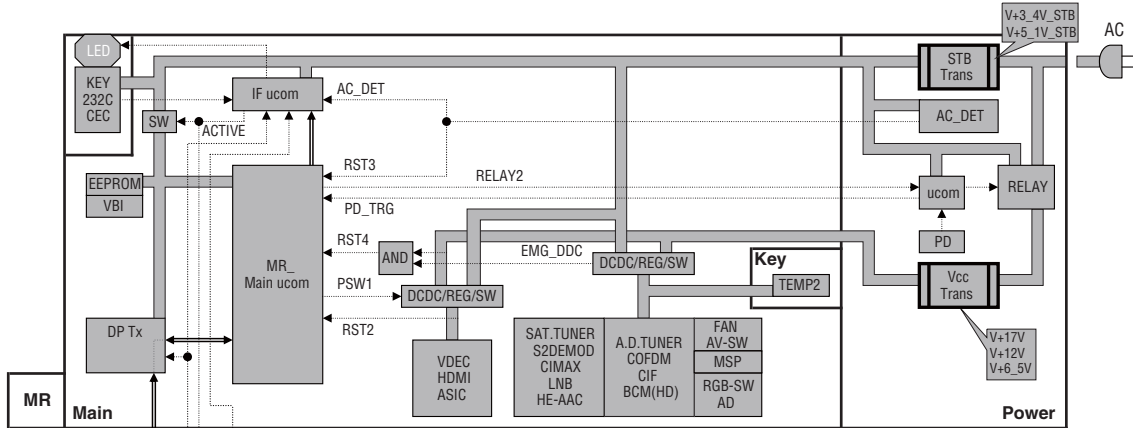
<Specified time and difference of voltages>

Rise	
Item	Specified Time
STB5.1V to STB3.4V	$-50ms \leq t1' \leq 50ms$
Item	Specified difference of voltages
STB3.4V - Control signal (*)	$0V \leq \Delta V1$

(*) Control signals (output signals) denote AC_DET and PD_TRG signals.

A DETAILS OF POWER ON SEQUENCE

AC-OFF



(MR) Output port setting

IF: ACTIVE	OFF
MR Main: RELAY2	OFF
MR Main: PSW1	OFF

(MR) Input port state

MR Main: RST4	OFF
MR Main: RST2	OFF
MR Main: PD_TRG	OFF

(MR) Operation outline

All devices are not electrified.

(Panel) Output port setting

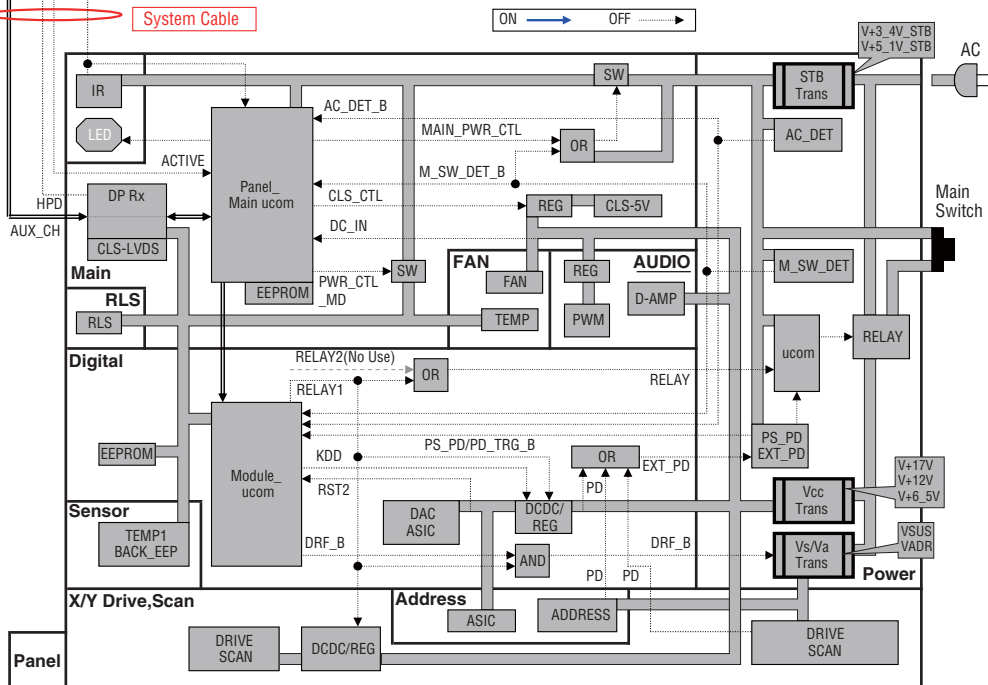
Panel Main: MAIN_PWR_CTL	OFF
Panel Main: PWR_CTL_MD	OFF
Panel Main: CLS_CTL	OFF
DP Rx: HPD	OFF
Module: RELAY1 / KDD	OFF
Module: DRF_B	OFF

(Panel) Input port state

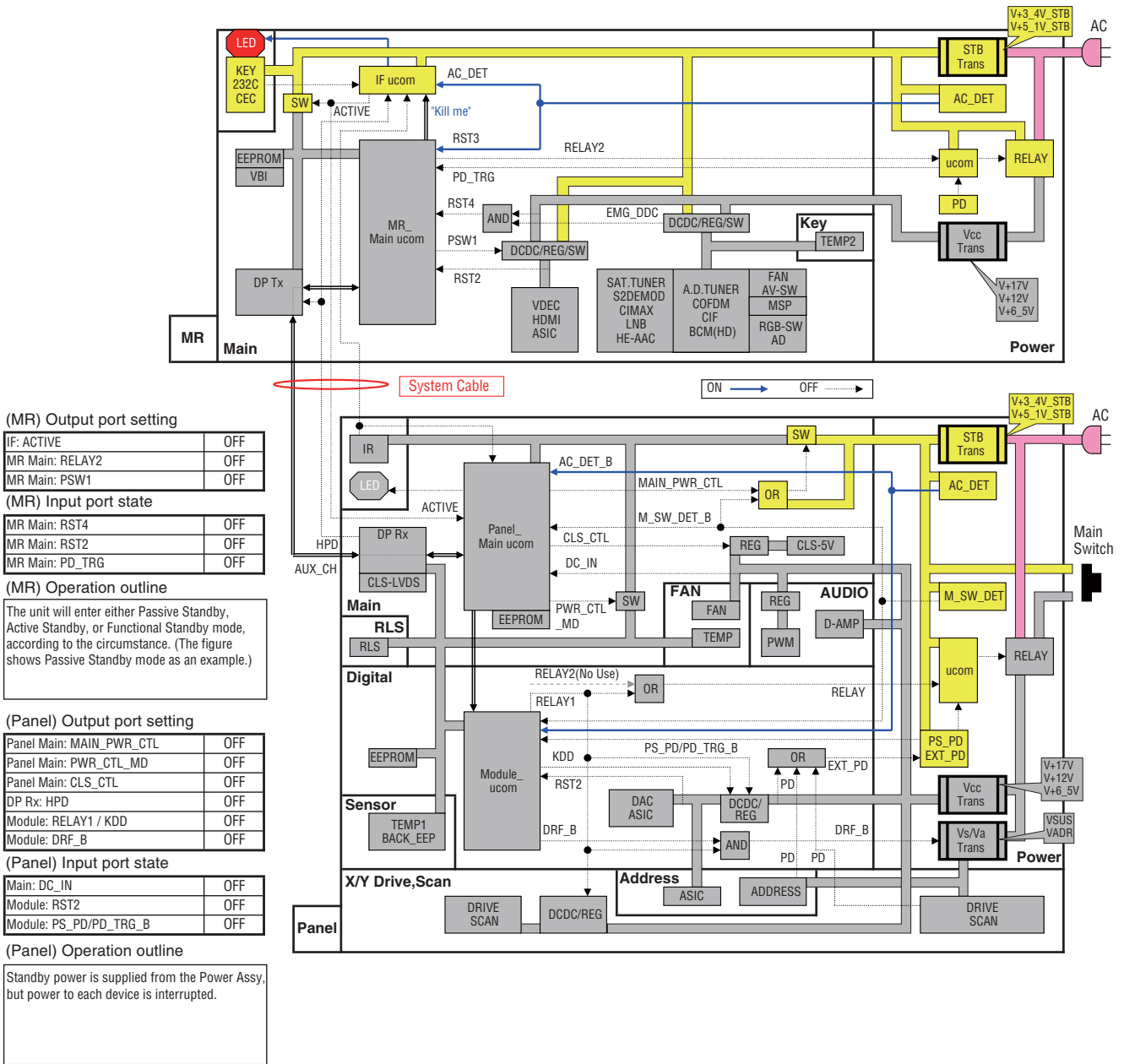
Main: DC_IN	OFF
Module: RST2	OFF
Module: PS_PD/PD_TRG_B	OFF

(Panel) Operation outline

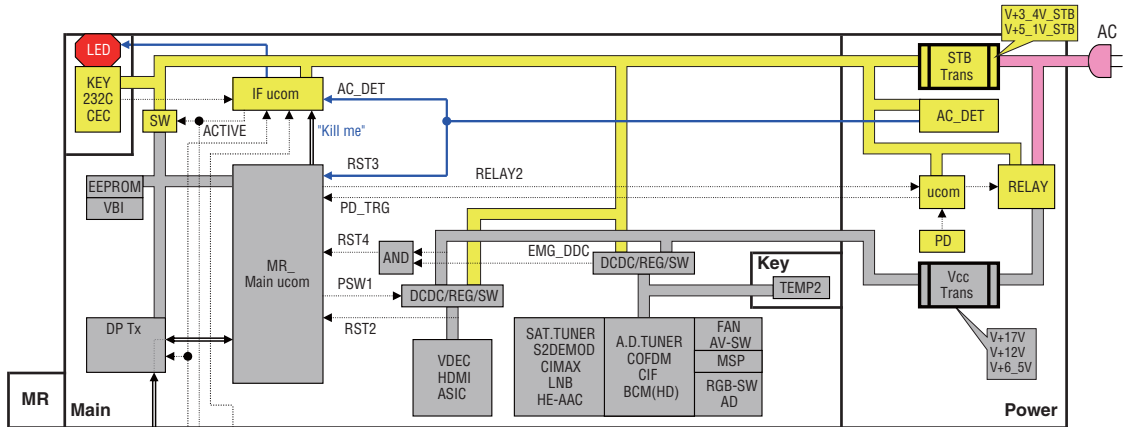
All devices are not electrified.



Panel Main Power OFF



Passive Standby



(MR) Output port setting

IF: ACTIVE	OFF
MR Main: RELAY2	OFF
MR Main: PSW1	OFF

(MR) Input port state

MR Main: RST4	OFF
MR Main: RST2	OFF
MR Main: PD_TRG	OFF

(MR) Operation outline

Only the periphery of the IF microcomputer are operated.

(Panel) Output port setting

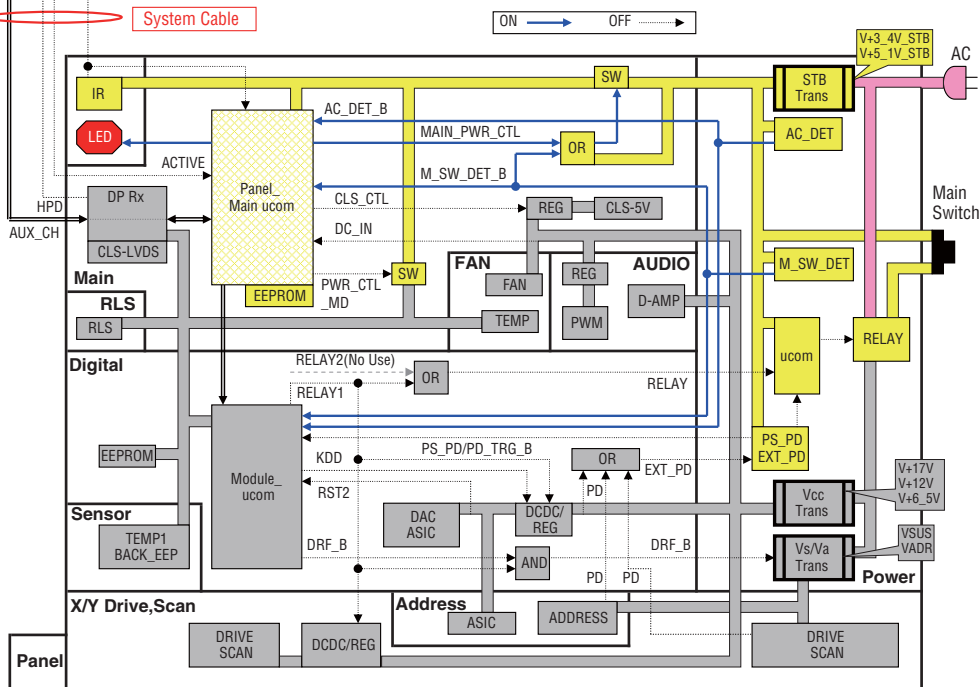
Panel Main: MAIN_PWR_CTL	ON
Panel Main: PWR_CTL_MD	OFF
Panel Main: CLS_CTL	OFF
DP Rx: HPD	OFF
Module: RELAY1 / KDD	OFF
Module: DRF_B	OFF

(Panel) Input port state

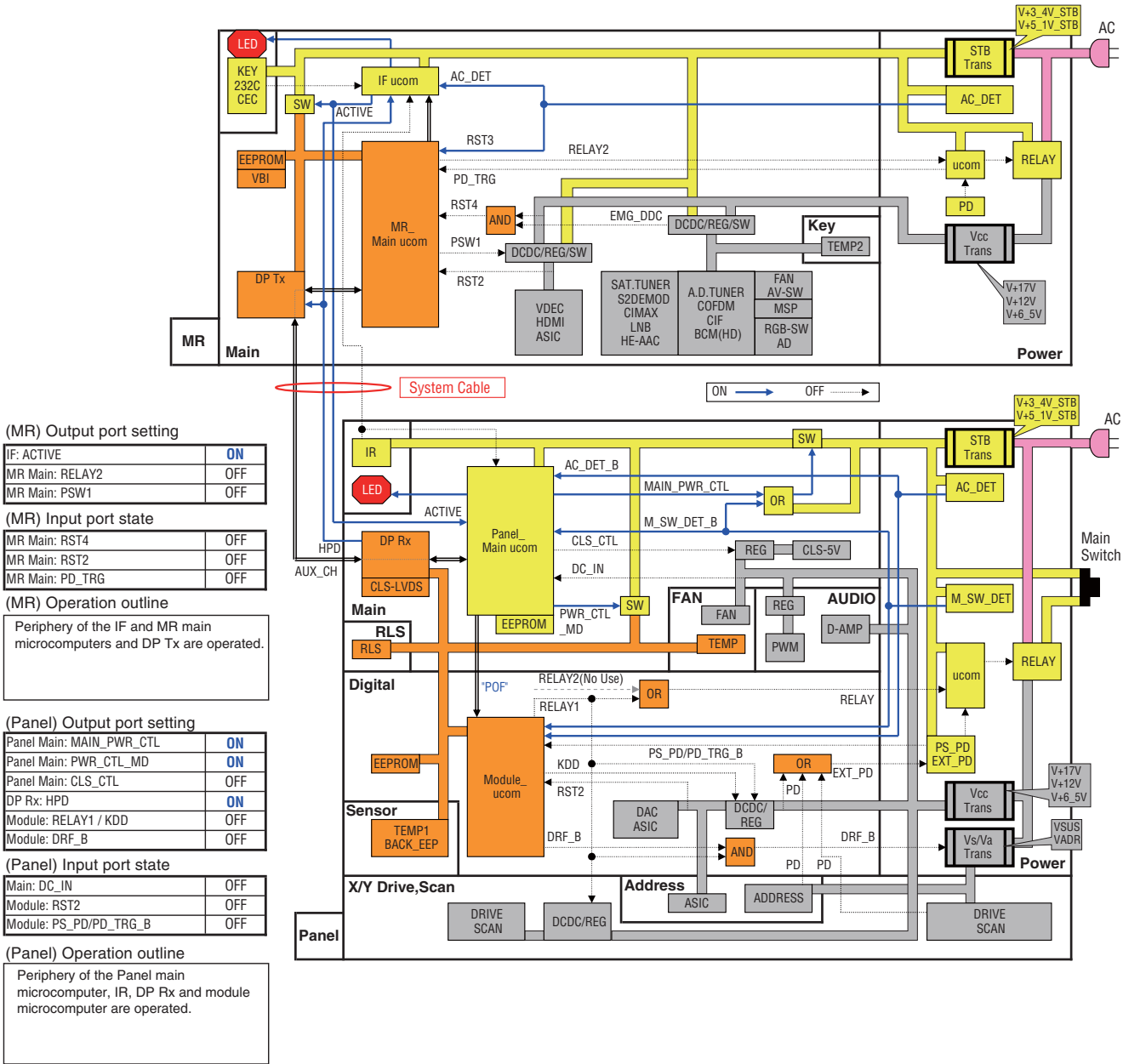
Main: DC_IN	OFF
Module: RST2	OFF
Module: PS_PD/PD_TRG_B	OFF

(Panel) Operation outline

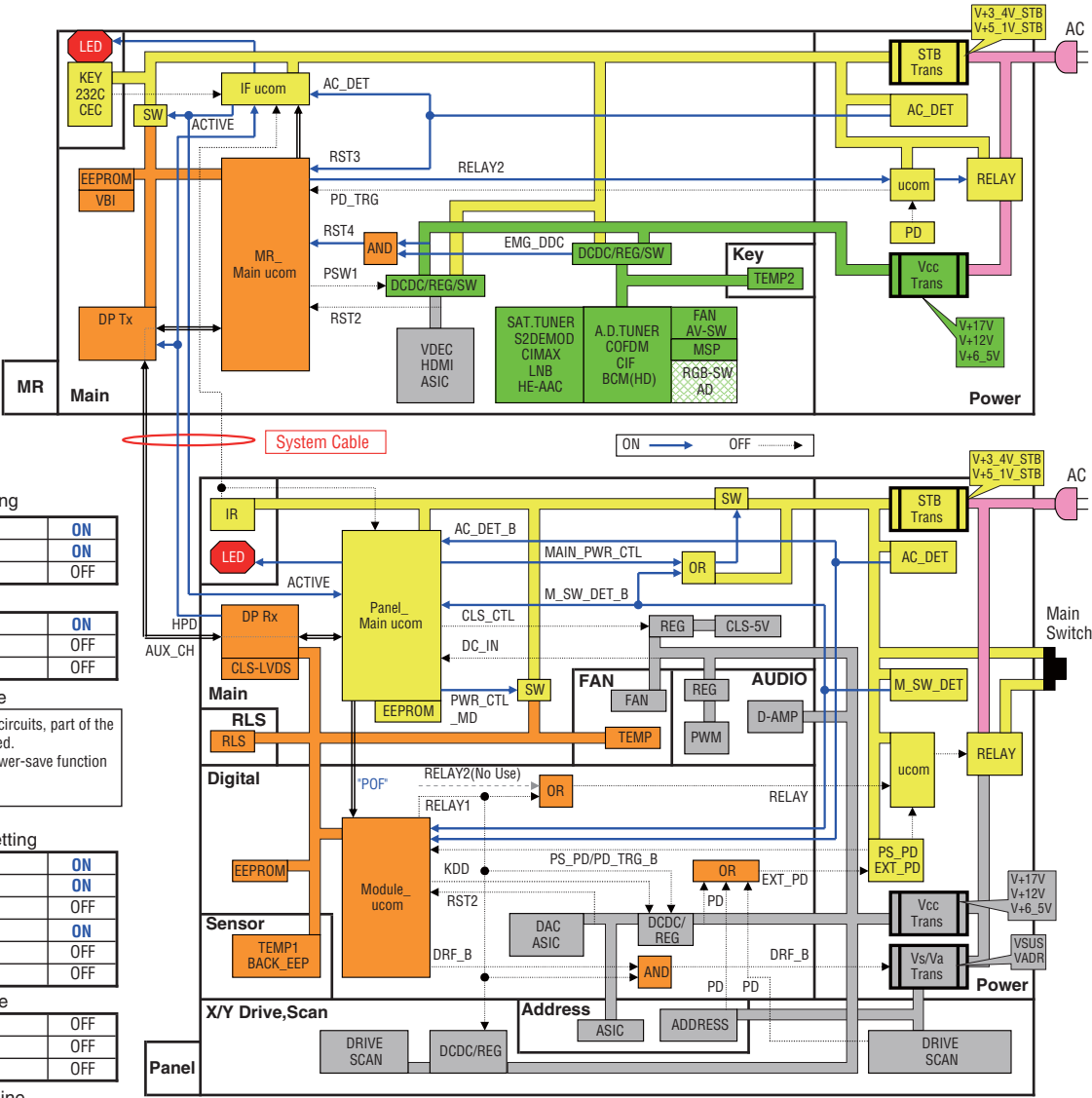
Only the periphery of the Panel main microcomputer and IR are operated.
In this time, panel main microcomputer is the sleep mode.



Active Standby



Function Standby



(MR) Output port setting

IF: ACTIVE	ON
MR Main: RELAY2	ON
MR Main: PSW1	OFF

(MR) Input port state

MR Main: RST4	ON
MR Main: RST2	OFF
MR Main: PD_TRG	OFF

- (MR) Operation outline
- Besides the standby power circuits, part of the Vcc circuits are also activated.
 - RGB-SW/AD IC uses the power-save function of the IC.

(Panel) Output port setting

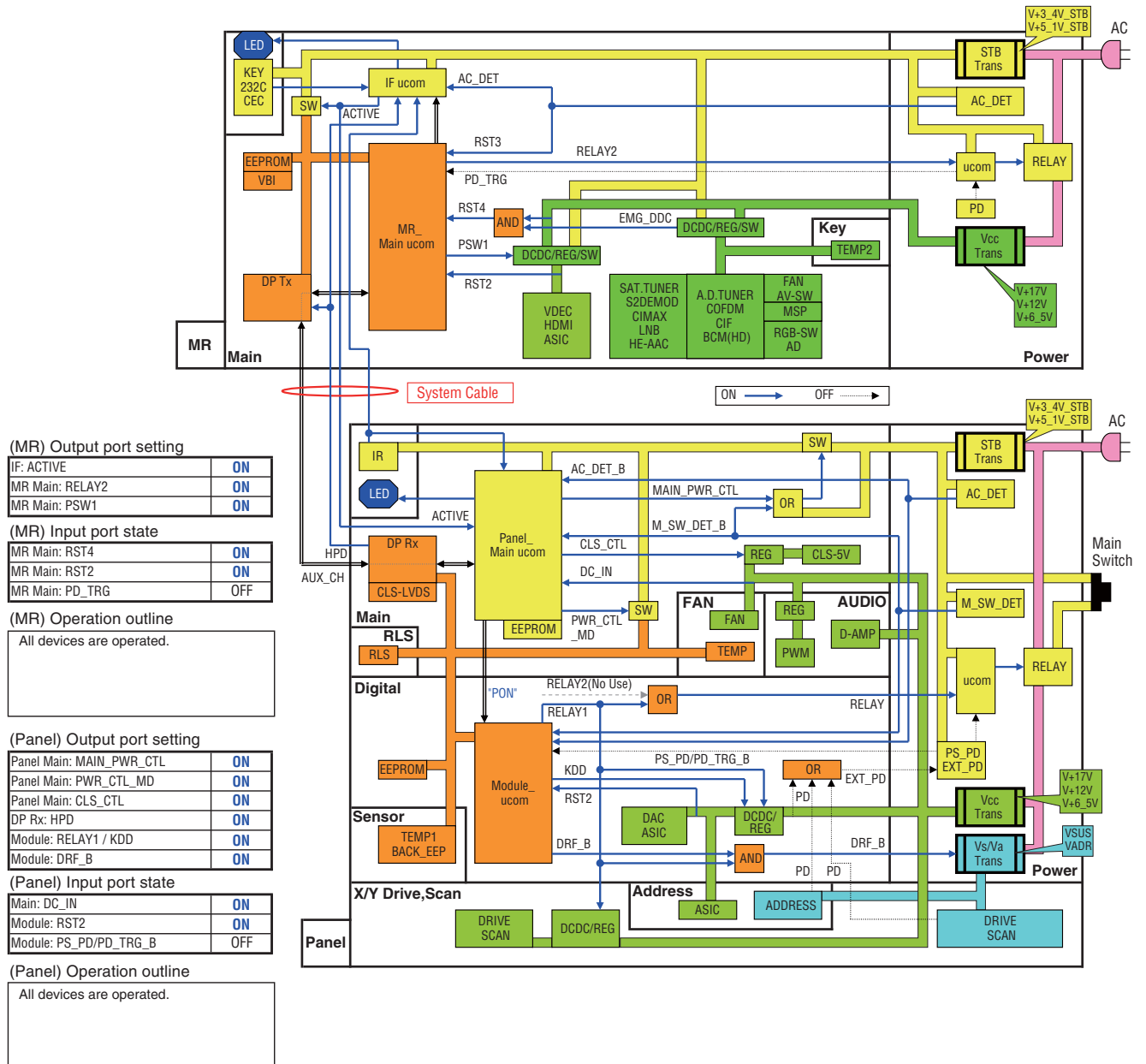
Panel Main: MAIN_PWR_CTL	ON
Panel Main: PWR_CTL_MD	ON
Panel Main: CLS_CTL	OFF
DP Rx: HPD	ON
Module: RELAY1 / KDD	OFF
Module: DRF_B	OFF

(Panel) Input port state

Main: DC_IN	OFF
Module: RST2	OFF
Module: PS_PD/PD_TRG_B	OFF

- (Panel) Operation outline
- Periphery of the Panel main microcomputer, IR, DP Rx and module microcomputer are operated.
(As same state as the active standby)

PDP Screen ON

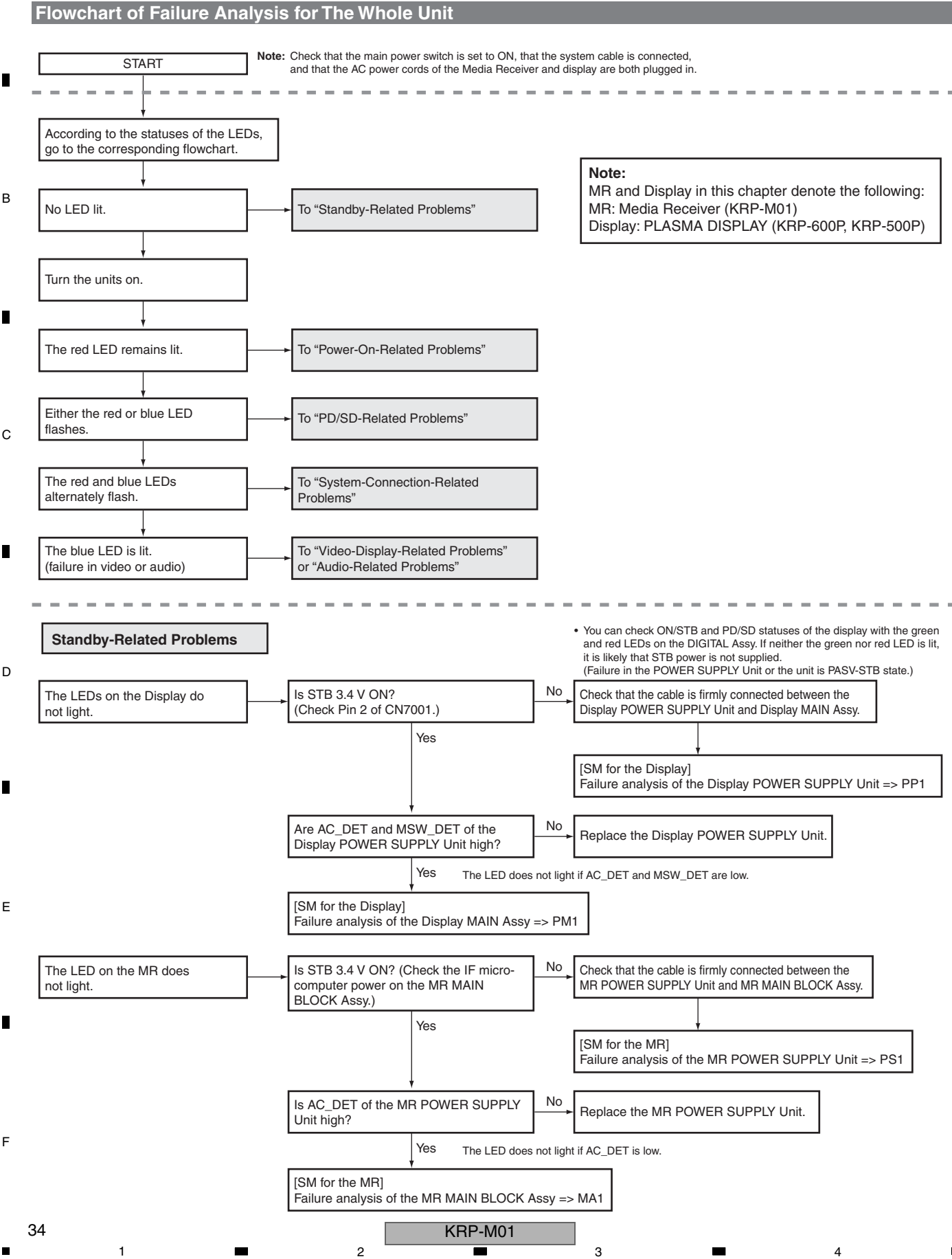


1234

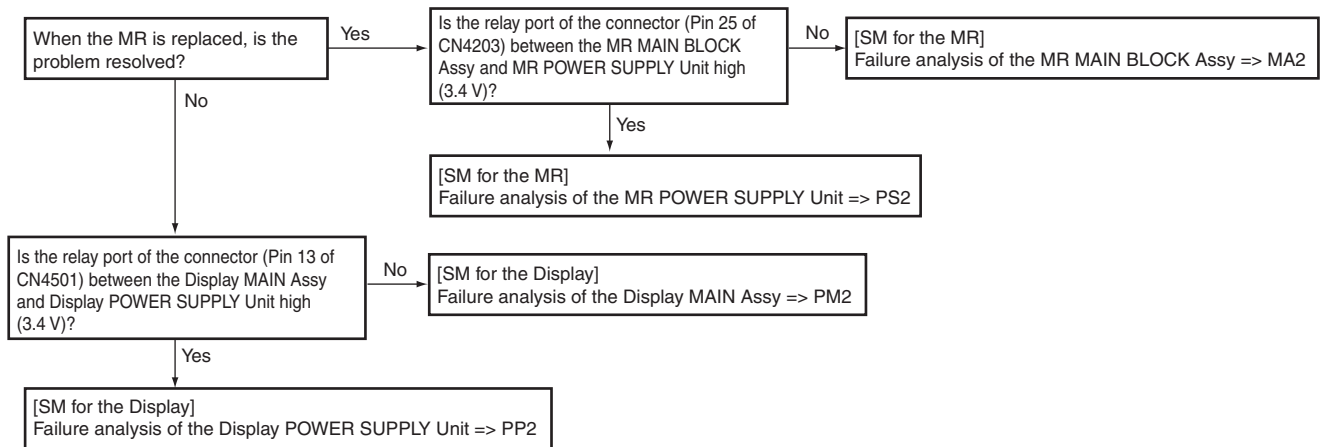
5.2 DIAGNOSIS FLOWCHART OF FAILURE ANALYSIS

A

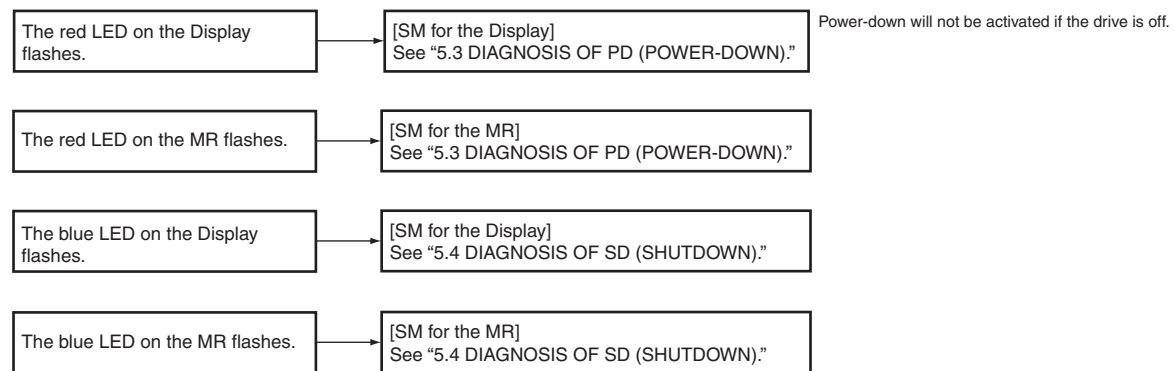
[1] WHOLE UNIT



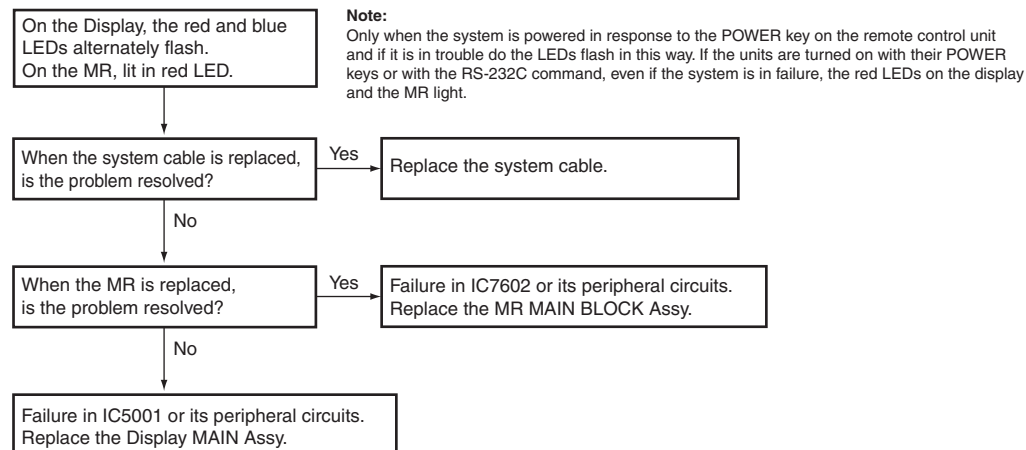
Power-On-Related Problems



PD/SD-Related Problems



System-Connection-Related Problems



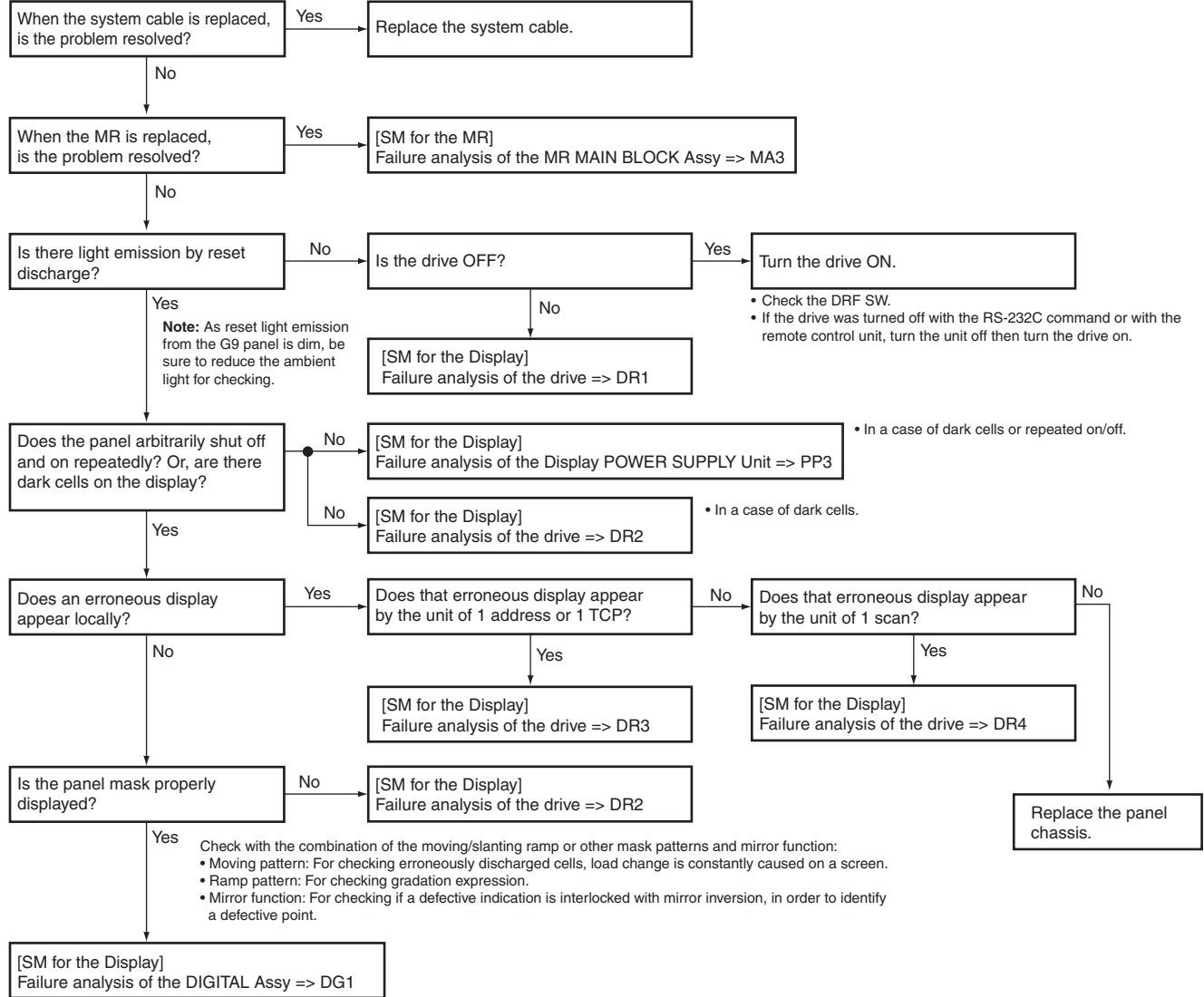
A

Video-Display-Related Problems

B

C

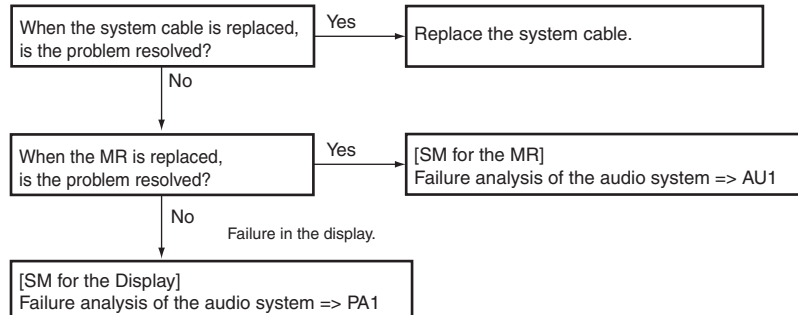
D



E

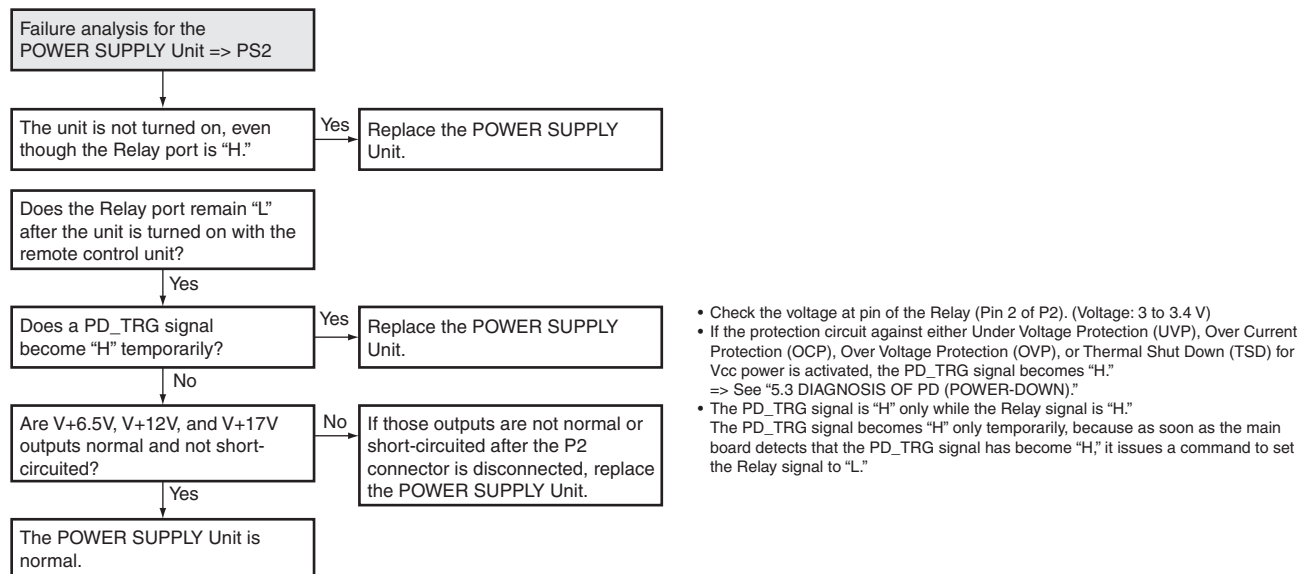
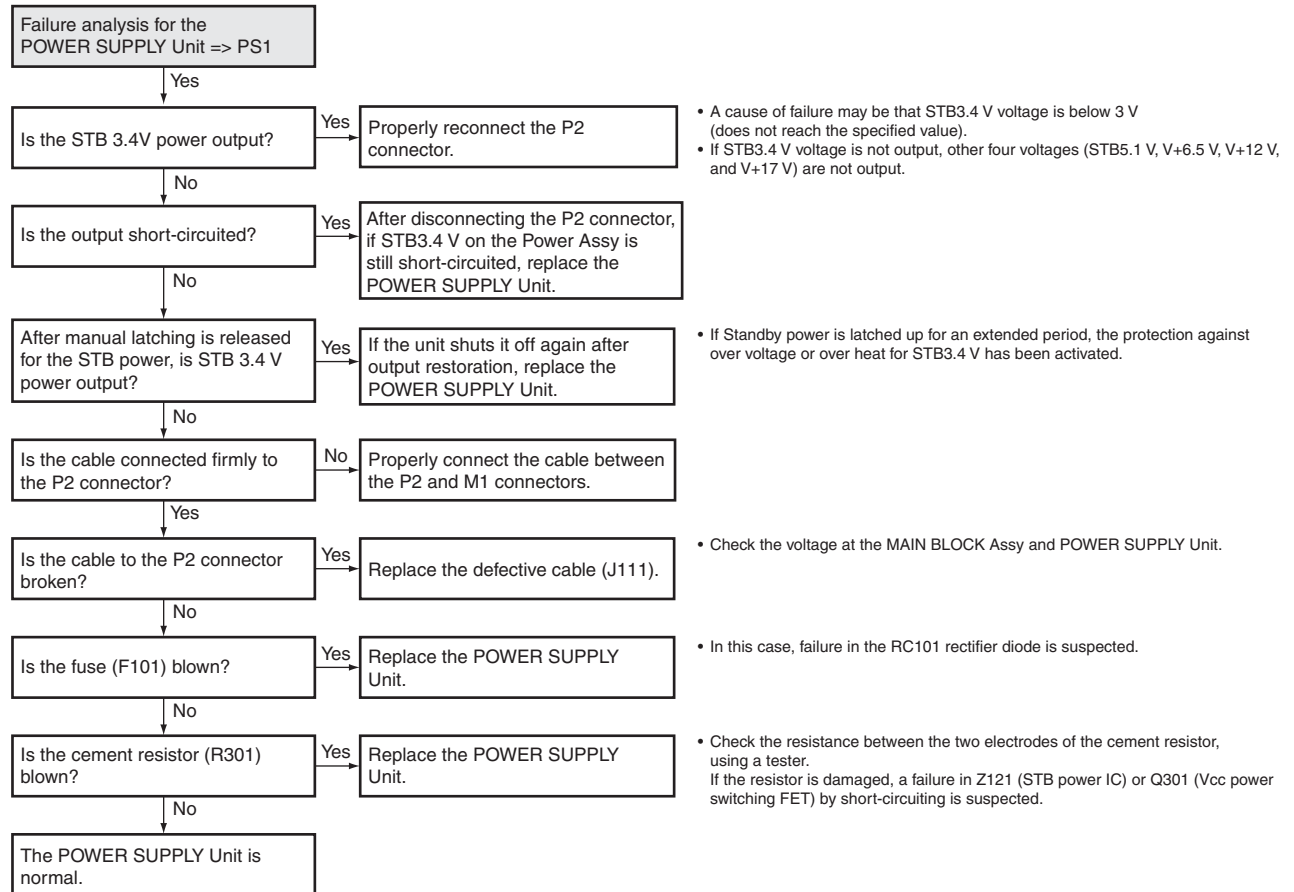
Audio-Related Problems

F



[2] POWER SUPPLY UNIT

Flowchart of Failure Analysis for The POWER SUPPLY Unit



[3] MAIN BLOCK ASSY

Flowchart of Failure Analysis for The MAIN BLOCK Assy

Failure analysis for the
MAIN BLOCK Assy => MA1

The STB LED does not light although
STB 3.4 V power is supplied.

Is resetting of the IF
microcomputer (pin 10) canceled?

No

Replace the MAIN BLOCK Assy.

Failure in the RST IC (IC6801) output or its peripheral circuits.

Yes

Is the voltage at Pin 13 of the M2
connector High?

No

Replace the MAIN BLOCK Assy.

Failure in the line between the IF microcomputer and M2 connector.

Yes

Is the M2 connector securely
connected?

No

Securely connect the M2 connector.

Yes

Is the cable that is connected to
the M2 connector broken?

Yes

Replace the cable (J112).

No

No problem with the MAIN BLOCK
Assy. Check the LED Assy.

Failure analysis for the
MAIN Assy => MA2

The RELAY port does not work.
The power is not turned on.

Are the voltages (1.5 V/2.5 V/3.4 V)
supplied to the main microcomputer?

No

Replace the MAIN BLOCK Assy.

Yes

Is voltage at REQ_IF (TP6830) on
the MAIN BLOCK Assy High
(3.4 V)?

No

Can the unit be turned on, using
the remote control unit?

No

Replace the system cable that
connects between the Display and
MAIN BLOCK Assy (MR).

NG

Replace the MAIN BLOCK Assy.

Yes

Can the unit be turned on, using
the Power switch on the unit?

No

Replace the cable (J112) that
connects between the KEY, LED
and MAIN BLOCK Assys.

NG

Replace the KEY Assy.

NG

Replace the MAIN BLOCK Assy.

Can the unit be turned on, using
RS-232C commands?

No

Replace the 50P cable (J203) that
connects between the REAR_IO
and MAIN BLOCK Assys.

NG

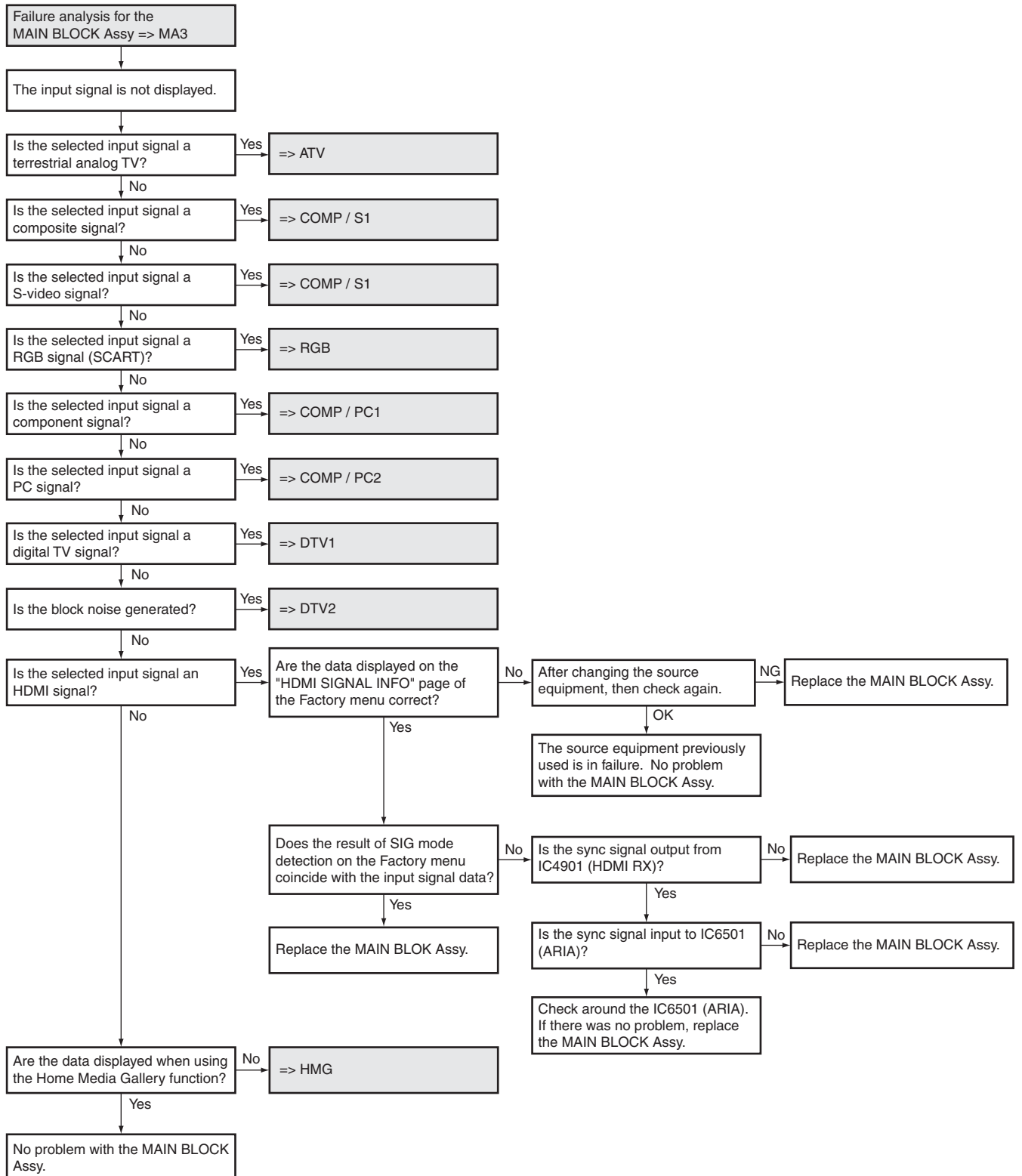
Replace the REAR_IO Assy.

NG

Replace the MAIN BLOCK Assy.

Replace the MAIN BLOCK Assy.

Flowchart of Failure Analysis for The MAIN BLOCK Assy



A

[4] VIDEO SYSTEM

Flowchart of Failure Analysis for The Video System

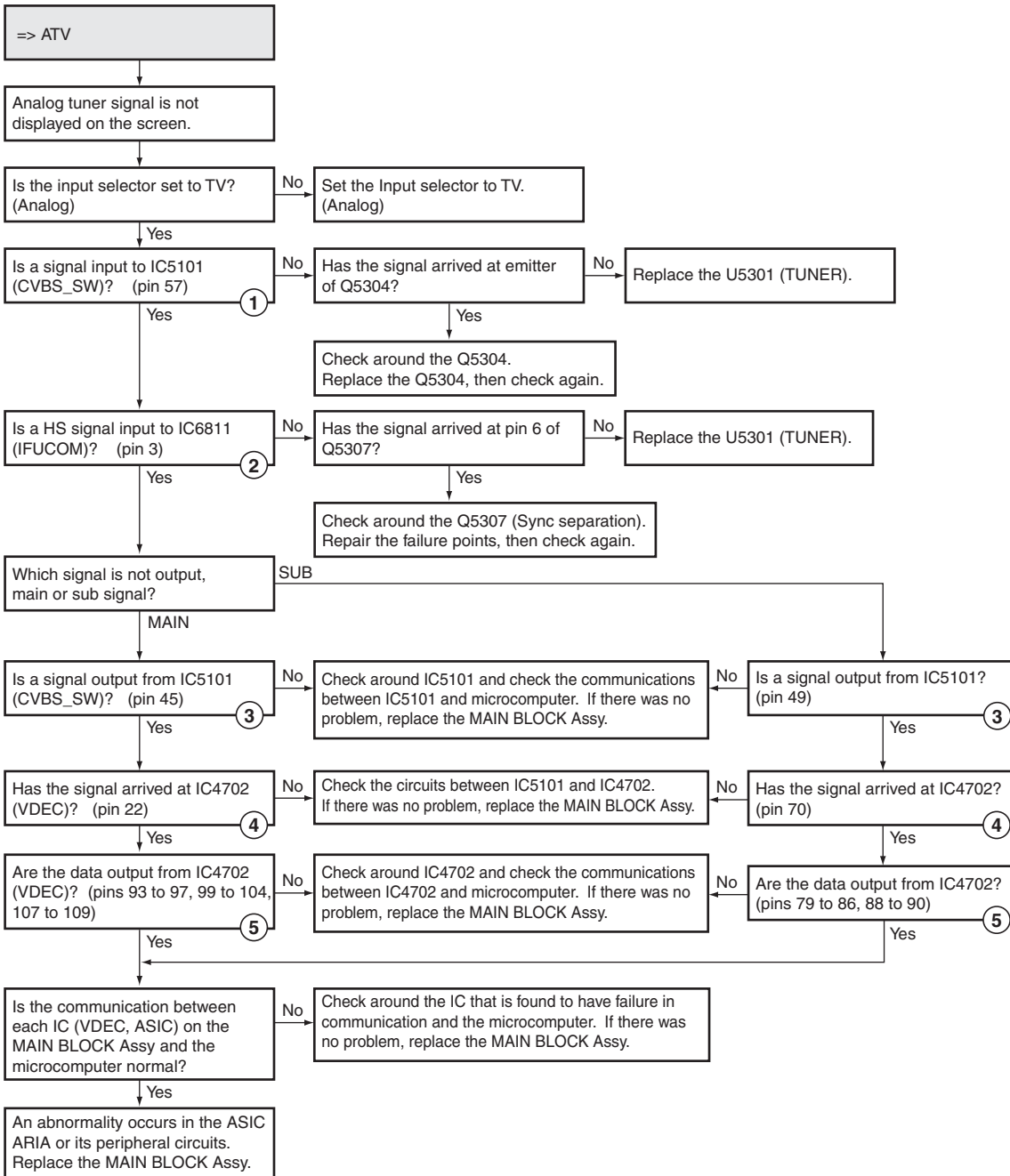
B

C

D

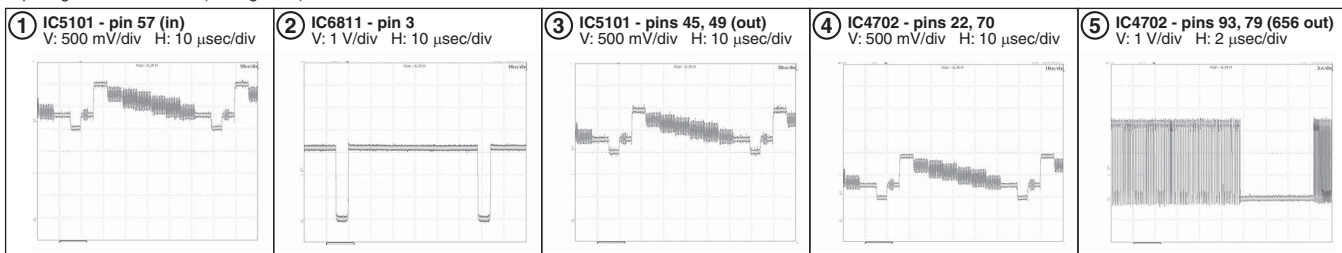
E

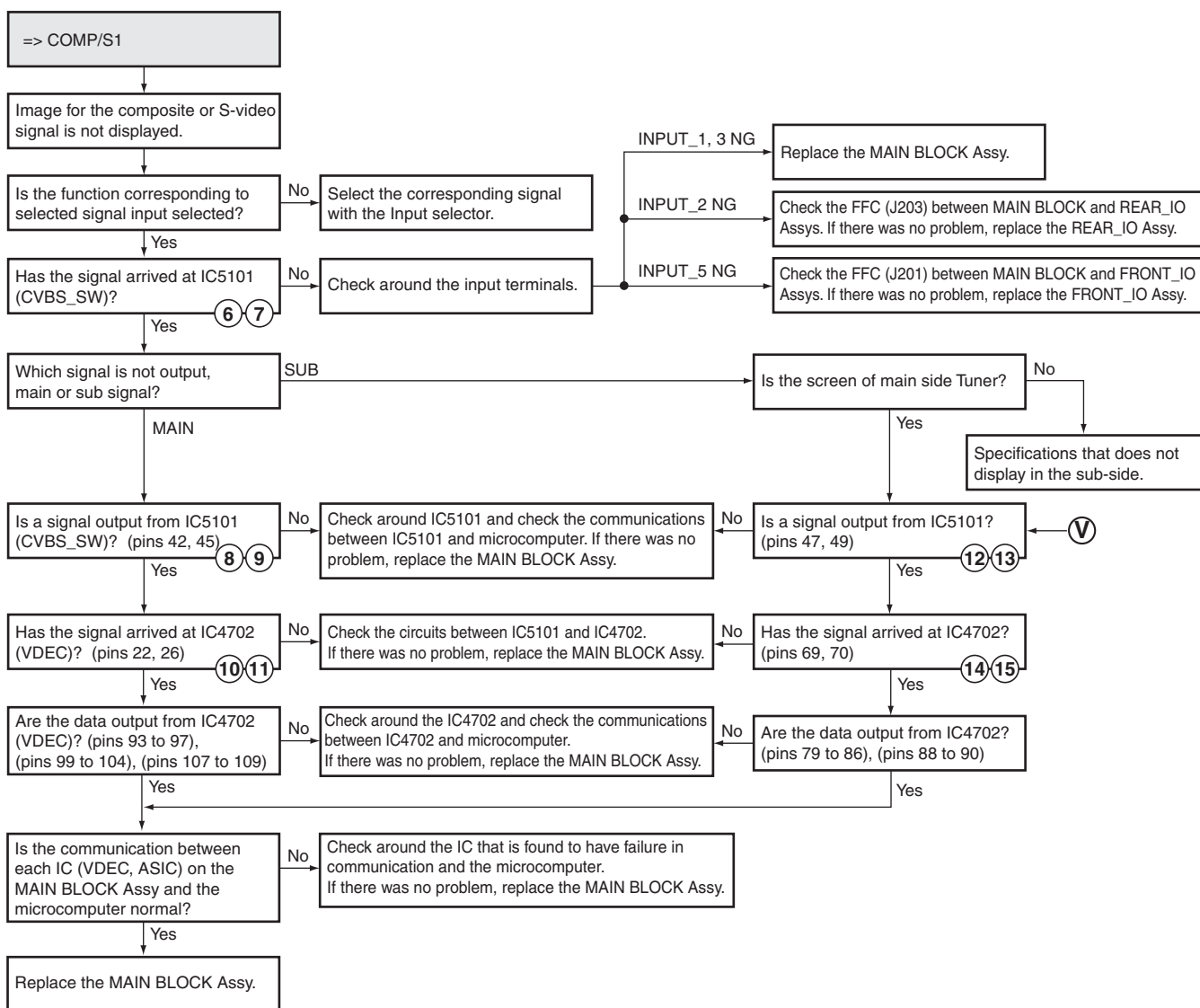
F



• Waveforms

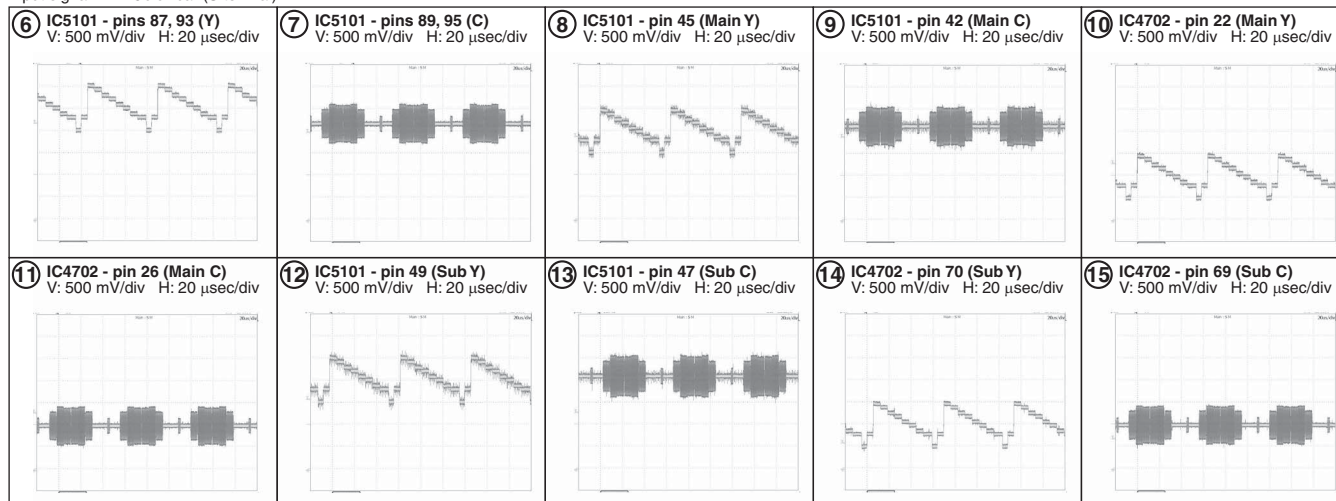
Input signal: PAL Color-bar (Analog tuner)





• Waveforms

Input signal: PAL Color-bar (S terminal)



A

=> RGB

Image for the RGB (SCART) input signal is not displayed.

Is the function corresponding to selected signal input selected?

No

Select the corresponding signal with the Input selector.

Yes

B

Which signal is not output, main or sub signal?

Sub

Is the screen of main side Tuner?

No

Specifications that does not display in the sub-side.

Main

Go to **V**.

Has the signal arrived at IC5501 (RGBSW)?

No

Check the circuits between JA7502 and IC5501. If there was no problem, replace the MAIN BLOCK Assy.

Yes

Is a signal output from IC5501? (pins 41, 43 and 45)

No

Check around IC5501 and check the communications between IC5501 and microcomputer. If there was no problem, replace the MAIN BLOCK Assy.

Yes

16 **17** **18**

C

Has the signal arrived at IC4702? (pins 27, 28 and 65)

No

Check the circuits between IC5501 and IC4702. If there was no problem, replace the MAIN BLOCK Assy.

Yes

19 **20** **21**

Is the communication between each IC (VDEC, ASIC) on the MAIN BLOCK Assy and the microcomputer normal?

No

Check around the IC that is found to have failure in communication and the microcomputer. If there was no problem, replace the MAIN BLOCK Assy.

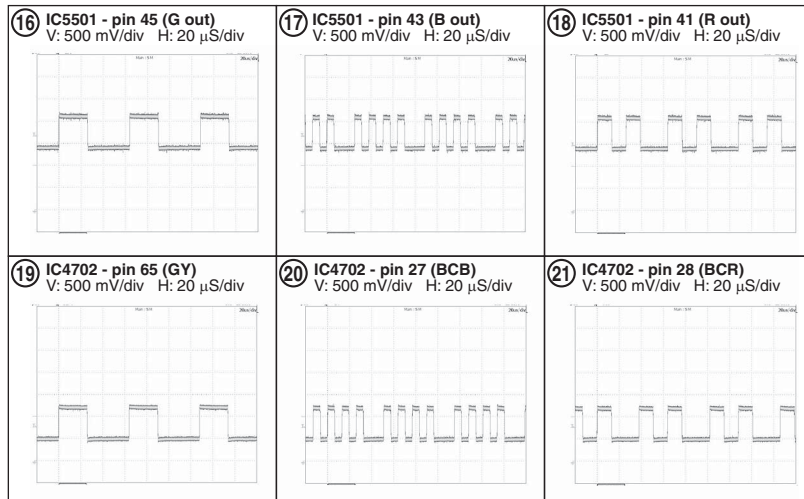
Yes

D

Replace the MAIN BLOCK Assy.

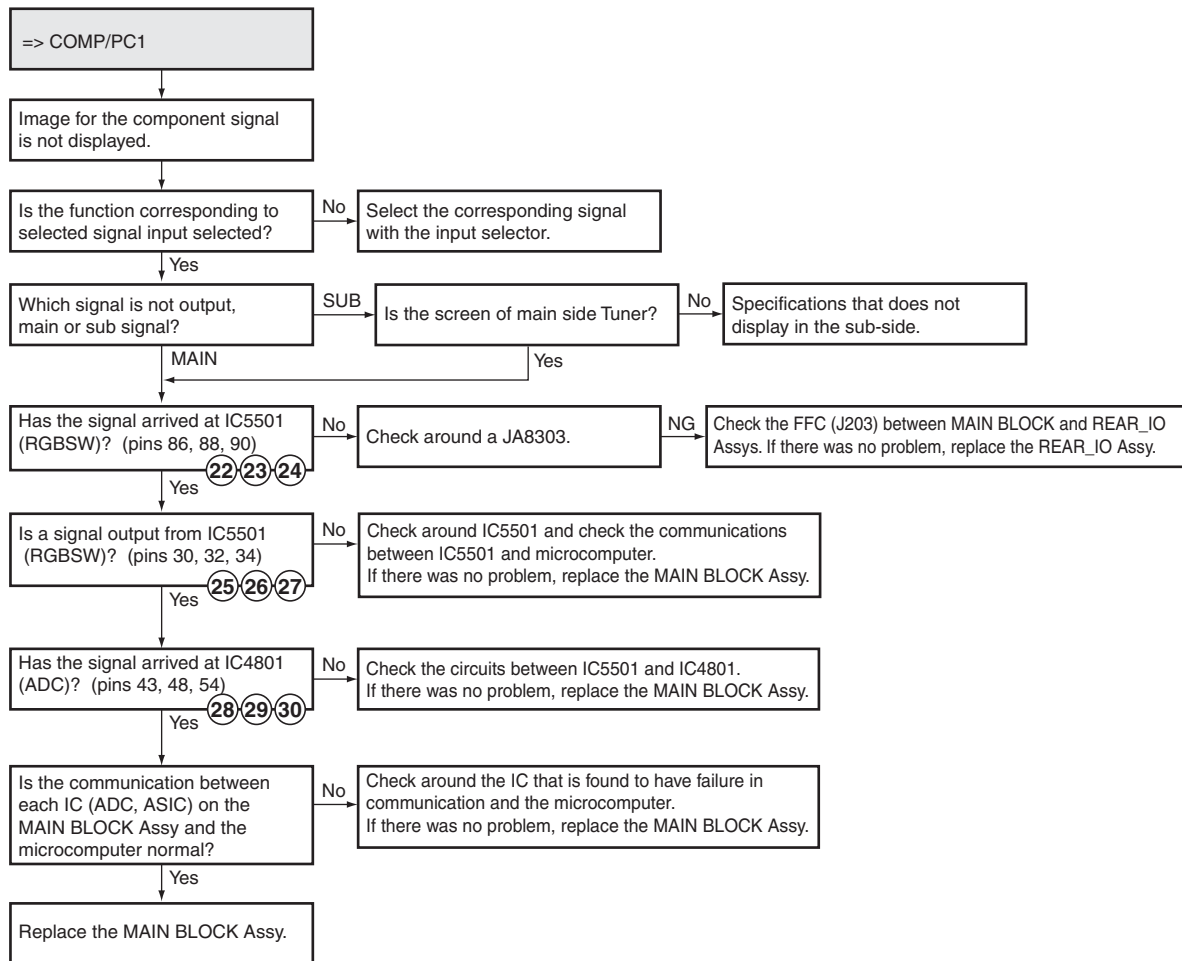
Waveforms

Input signal: PAL Color-bar (SCART RGB terminal)



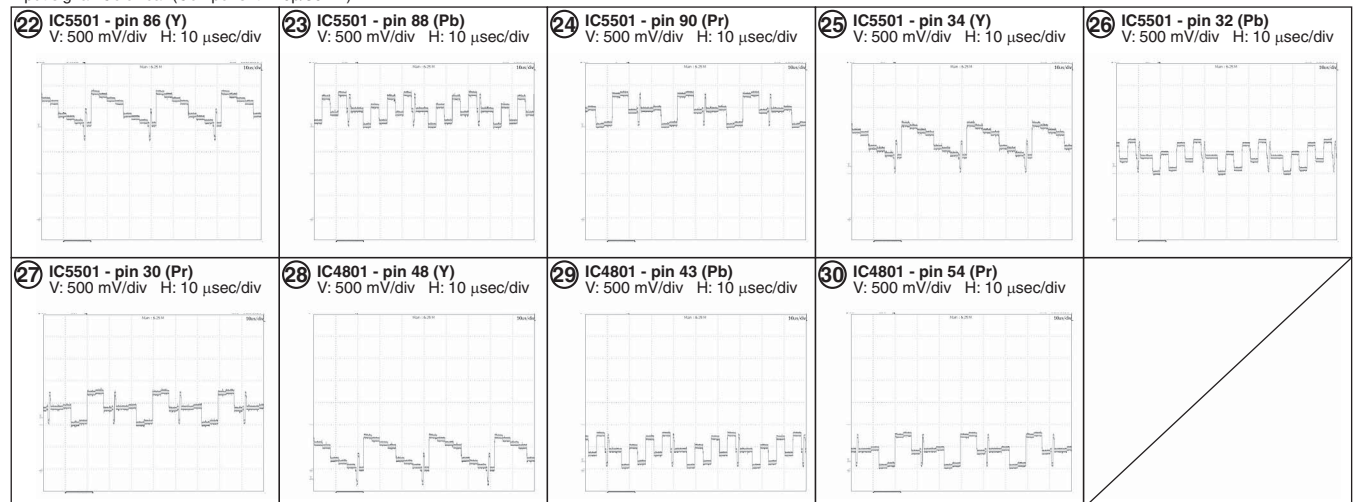
E

F



• Waveforms

Input signal: Color-bar (Component 720p/50 Hz)



A

=> COMP/PC2

Image for the PC signals is not displayed.

Is the function corresponding to selected signal input selected?

No
Select the corresponding signal with the input selector.

Yes

B

Which signal is not output, main or sub signal?

SUB
Is the screen of main side Tuner?

No
Specifications that does not display in the sub-side.

MAIN

Yes

Has the signal arrived at IC5501 (RBSW)? (pins 2, 4, 6, 14, 15)

No
Check around a CN8503.

NG
Check the FFC (J201) between MAIN BLOCK and FRONT_IO Assys. If there was no problem, replace the FRONT_IO Assy.

Yes

Is a signal output from IC5501 (RBSW)? (pins 30, 32, 34)

No
Check around IC5501 and check the communications between IC5501 and microcomputer. If there was no problem, replace the MAIN BLOCK Assy.

Yes

C

Has the signal arrived at IC4801 (ADC)? (pins 43, 48, 54)

No
Check the circuits between IC5501 and IC4801. If there was no problem, replace the MAIN BLOCK Assy.

Yes

Is the communication between each IC (ADC, ASIC) on the MAIN BLOCK Assy and the microcomputer normal?

No
Check around the IC that is found to have failure in communication and the microcomputer. If there was no problem, replace the MAIN BLOCK Assy.

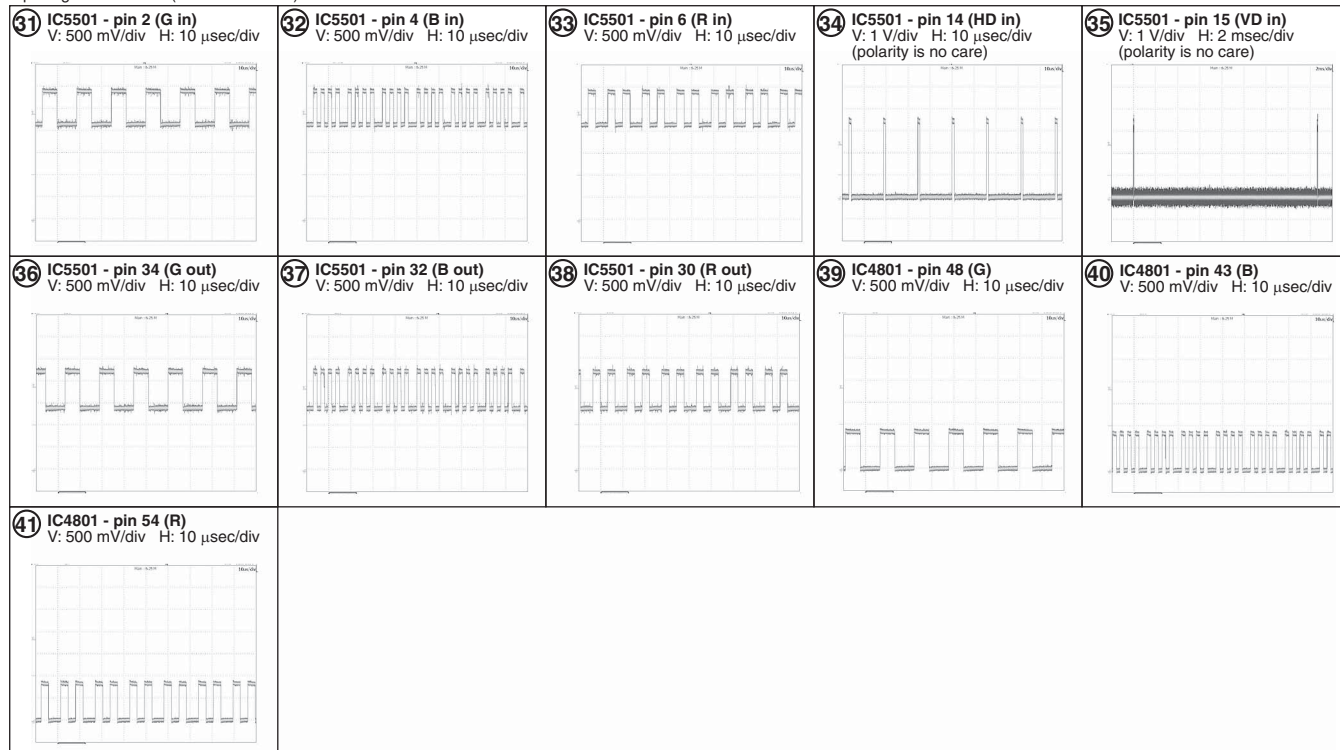
Yes

Replace the MAIN BLOCK Assy.

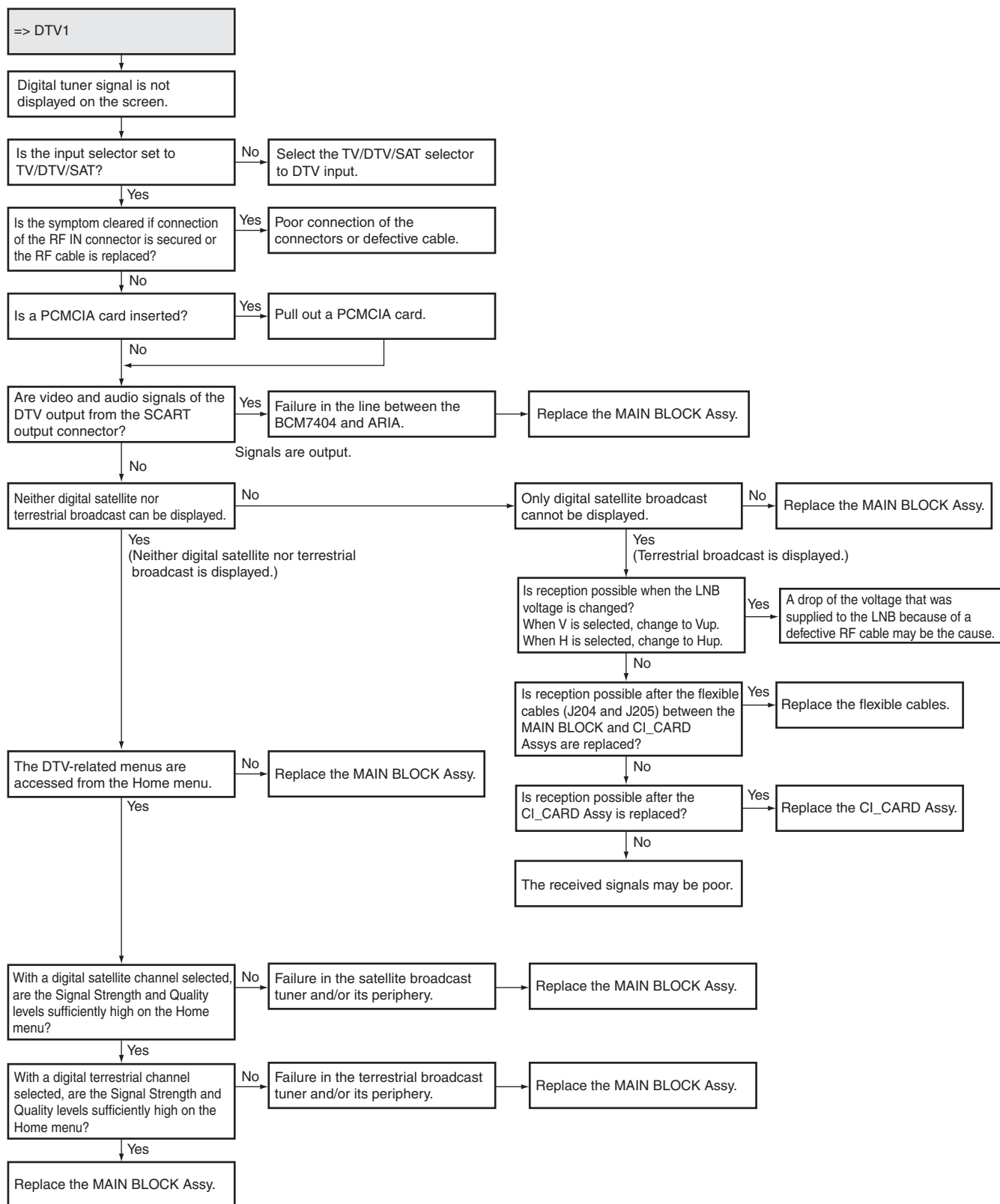
D

● Waveforms

Input signal: Color-bar (PC SXGA/60 Hz)



F



A

[Common to the DTVs 1 and 2] How to Display the DTB Service Menu

As you can display the DTB Service Menu from Factory mode, you should have a remote control unit that supports Factory mode.

Step 1: Press the **FACTORY** key on the remote control unit to display the **INFORMATION** screen in Factory mode.

Step 2: Press the **MUTING** key on the remote control unit 4 times to display the **INITIALIZE** screen.

Step 3: Press the **↓** key on the remote control unit twice so that **DTB SERVICE MODE (+)** is displayed at the bottom of the screen.

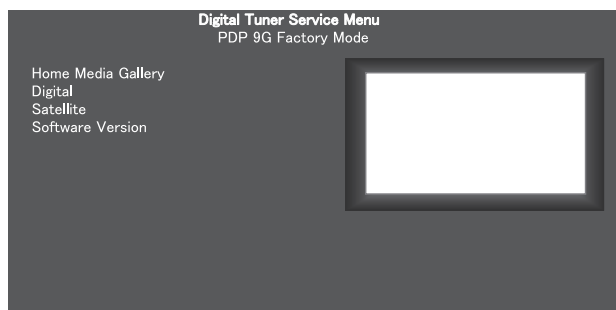
Step 4: Press the **ENTER/SET** key on the remote control so that **MODE SHIFT <=> :No** is displayed at the bottom of the screen.

Step 5: Press the **←** or **→** key on the remote control so that **MODE SHIFT <=> :YES** is displayed at the bottom of the screen.

Step 6: Press the **ENTER/SET** key on the remote control unit for 5 sec or more to display the DTB Service Menu.

B

Top page of the DTB Service Menu



C

Digital : Service menu for digital terrestrial broadcast reception

Satellite : Service menu for digital satellite broadcast reception

■

How to Change the LNB Voltage on the DTV Service Menu

On the Satellite screen of the DTV Service menu below, move the cursor to **LNB POWER** by using the **↓** key on the remote control unit then change the LNB voltage, using the **←** or **→** key.

D

The LNB voltage values are as shown below:

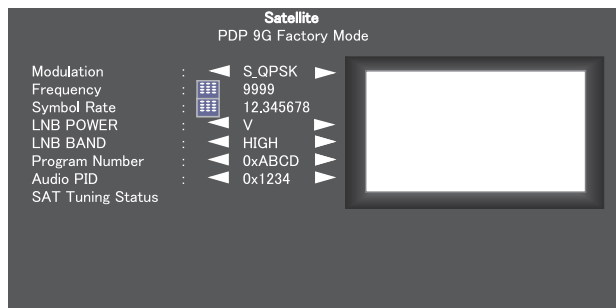
V: 13 V (Typ.)

H: 18 V (Typ.)

Vup: V+1 V

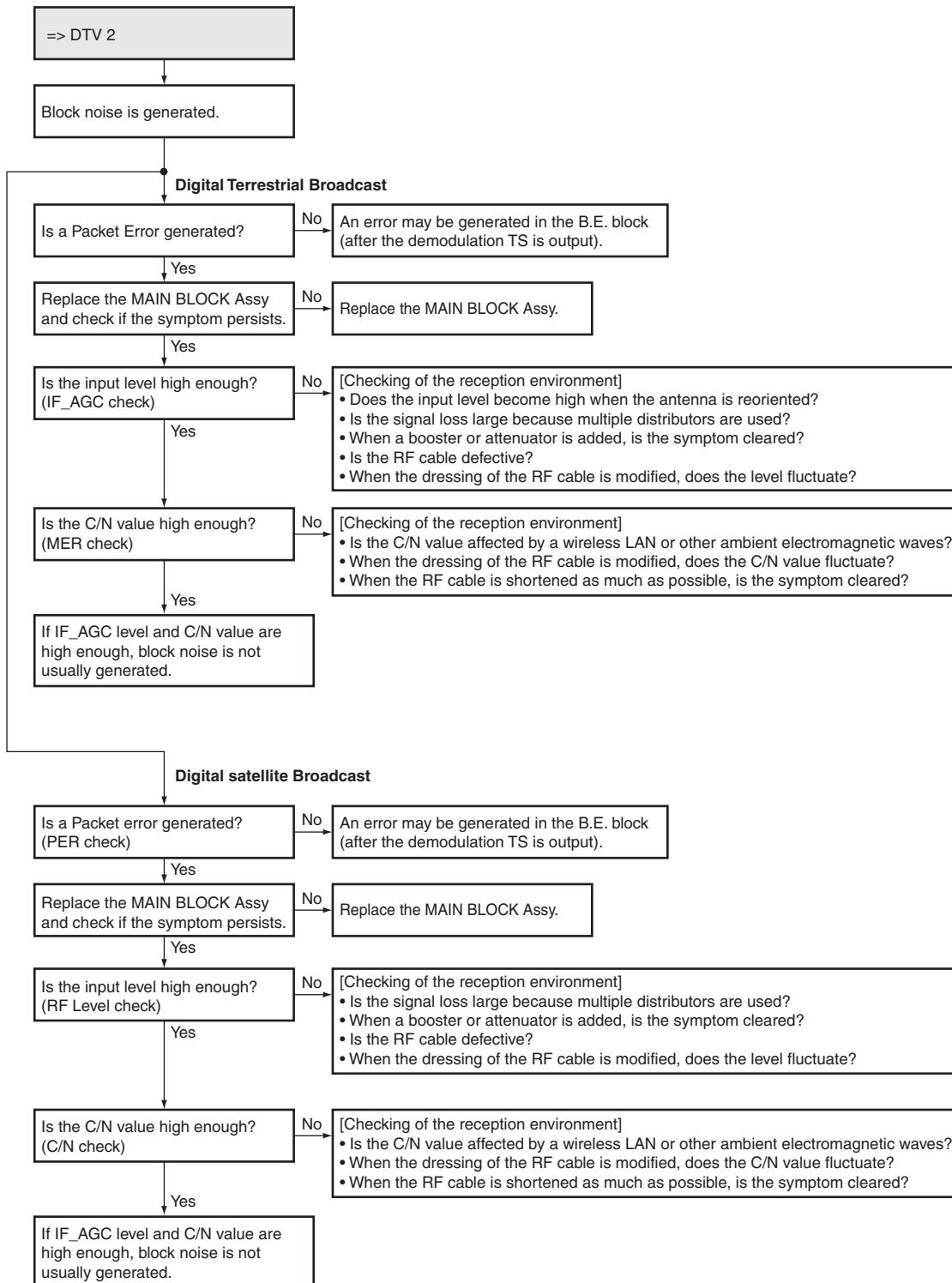
Hup: H+1 V

■



E

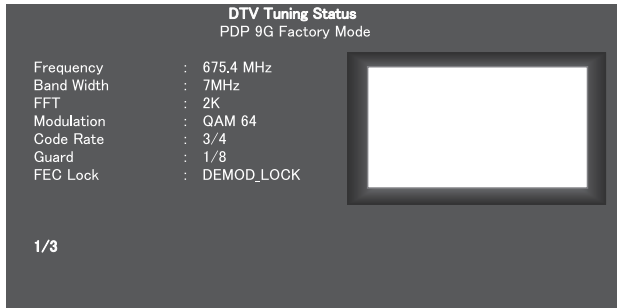
F



How to Confirm the DTV Tuning Status on the Digital Tuner Service Menu

If block noise is generated, it is necessary to acquire the DTV Tuning Status for the reception frequency of the signal in which block noise is generated. For comparison, it is also necessary to acquire the DTV Tuning Status for another reception frequency of the signal in which block noise is not generated. The DTV Tuning Status page to be acquired is shown below:

DTV Tuning Status (1/3)



Frequency : Frequency of the signal currently being received.
Band Width : Bandwidth of the signal currently being received.
FFT : FFT mode of the signal currently being received (2K or 8K).

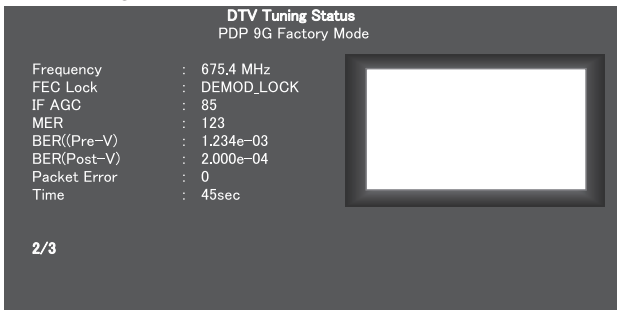
Modulation : Modulation method for the signal currently being received.

Code Rate : Code Rate of the signal currently being received.

Guard : Guard Interval of the signal currently being received.
FEC Lock : Current lock status of the receiver. The available lock statuses are as shown below:

DEMOD_LOCK
FEC_LOCK
DRX_LOCK
UNLOCK

DTV Tuning Status (2/3)



IF AGC : IF AGC level of the signal currently being received.

The AGC-level limits in normal reception are shown below.
Use the following values only as a guide, because they may be affected by the reception environment.

Modulation	Code Rate	Signal-level Limit in Normal Reception
QPSK	1/2	100
	2/3	100
	3/4	100
	5/6	100
	7/8	100
16QAM	1/2	100
	2/3	100
	3/4	100
	5/6	100
	7/8	100
64QAM	1/2	100
	2/3	58
	3/4	56
	5/6	55
	7/8	54

BER (Pre-V) : Pre-Viterbi Bit Error Rate of the signal currently being received.

BER (Post-V) : Post-Viterbi Bit Error Rate of the signal currently being received. If the value is 2.000E-04, block noise is not caused by a problem in the tuner.

Packet Error : Packet error count of the signal currently being received. If the packet error count is "0," block noise caused by the tuner will not be generated.

Time : Measured duration of BER (Pre-V), BER (Post-V), or Packet Error. To reset the value to 0 and restart measuring, press the ◀ or ▶ key on the remote control unit.

MER : Quality of the signal currently being received.
The signal qualities in normal reception are shown below.
Use the following values only as a guide.

Modulation	Code Rate	MER Limit in Normal Reception
QPSK	1/2	93
	2/3	85
	3/4	67
	5/6	76
	7/8	82
16QAM	1/2	98
	2/3	116
	3/4	127
	5/6	138
	7/8	145
64QAM	1/2	140
	2/3	170
	3/4	184
	5/6	197
	7/8	206

DTV Tuning Status (3/3)

DTV Tuning Status

PDP 9G Factory Mode

Program Number : 0x0101

Video PID : 0xABCD

Audio PID : 0x1234

PCR PID : 0x5678

Video Format : 1080i@60

Aspect : 16 : 9

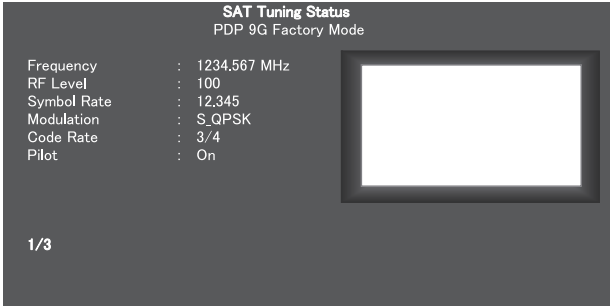
3/3

Program Number : No. of the program currently being received.
Video PID : Video PID of the program currently being received.
Audio PID : Audio PID of the program currently being received.
PCR PID : PCR PID of the program currently being received.
Video Format : Video Format of the program currently being received.
Aspect : Aspect ratio of the program currently being received.

How to Confirm the SAT Tuning Status on the Digital Tuner Service Menu

If block noise is generated, it is necessary to acquire the SAT Tuning Status for the reception frequency of the signal in which block noise is generated. For comparison, it is also necessary to acquire the SAT Tuning Status for another reception frequency of the signal in which block noise is not generated. The SAT Tuning Status page to be acquired is shown below:

SAT Tuning Status (1/3)

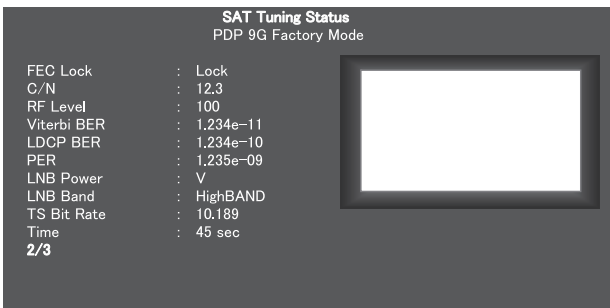


Frequency : Frequency of the signal currently being received.
 RF Level : Level of the signal currently being received.
 The signal-level limits in normal reception are shown below. Use the following values only as a guide, because they may be affected by the reception environment.

Modulation	Signal-level Limit in Normal Reception
S2_QPSK	50 to 75
S2_8PSK	50 to 75
S_QPSK	50 to 75

Modulation : Modulation method for the signal currently being received.
 Symbol Rate : Symbol Rate of the signal currently being received.
 Code Rate : Code Rate of the signal currently being received.
 Pilot : On/off status of the Pilot signal currently being received.

SAT Tuning Status (2/3)



FEC Lock : Current lock/unlock status of the error-correction function of the receiver.
 C/N : Current reception C/N. The limit C/Ns in normal reception are shown below. Use the following values only as a guide.

Limit C/N in normal reception

Modulation	Code Rate	Limit C/N in Normal Reception	Modulation	Code Rate	Limit C/N in Normal Reception
S2_QPSK	1/2	1.1	S2_8PSK	3/4	8.1
S2_QPSK	3/5	2.4	S2_8PSK	5/6	9.6
S2_QPSK	2/3	3.2	S2_8PSK	8/9	11.0
S2_QPSK	3/4	4.2	S2_8PSK	9/10	11.3
S2_QPSK	4/5	4.8	S_QPSK	1/2	5.2
S2_QPSK	5/6	5.3	S_QPSK	2/3	7.0
S2_QPSK	8/9	6.4	S_QPSK	3/4	8.0
S2_QPSK	9/10	6.6	S_QPSK	5/6	9.1
S2_8PSK	3/5	7.9	S_QPSK	7/8	9.8
S2_8PSK	2/3	8.0			

Viterbi BER : Bit error rate while the S_QPSK signal is being received. While the S2_QPSK or S2_8PSK signal is received, **** is displayed. If the value is 2e-4 or less, block noise is not caused by a problem in the tuner.

LDOP BER : Bit error rate while the S2_QPSK or S2_8PSK signal is being received. While the S_QPSK signal is received, **** is displayed.

PER : Packet error rate during reception. If the value is 0.000e-00, block noise is not caused by a problem in the tuner.

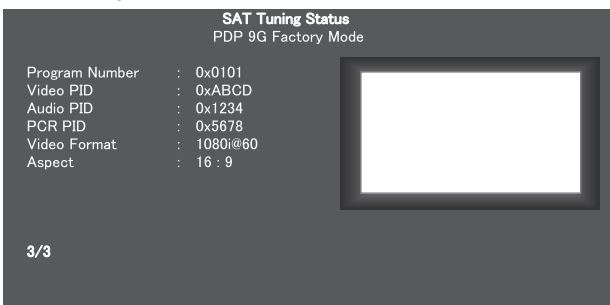
LNB POWER: Voltage currently being supplied to the LNB

LNB BAND : Frequency band that is currently set to the LNB

TS Bit Rate : TS Bit Rate of the signal currently being received

Time : Measured duration of Viterbi BER, LDOP BER, or PER. To reset the value to 0 and restart measuring, press the ◀ or ▶ key on the remote control unit.

SAT Tuning Status (3/3)



Program Number : No. of the program currently being received.

Video PID : Video PID of the program currently being received.

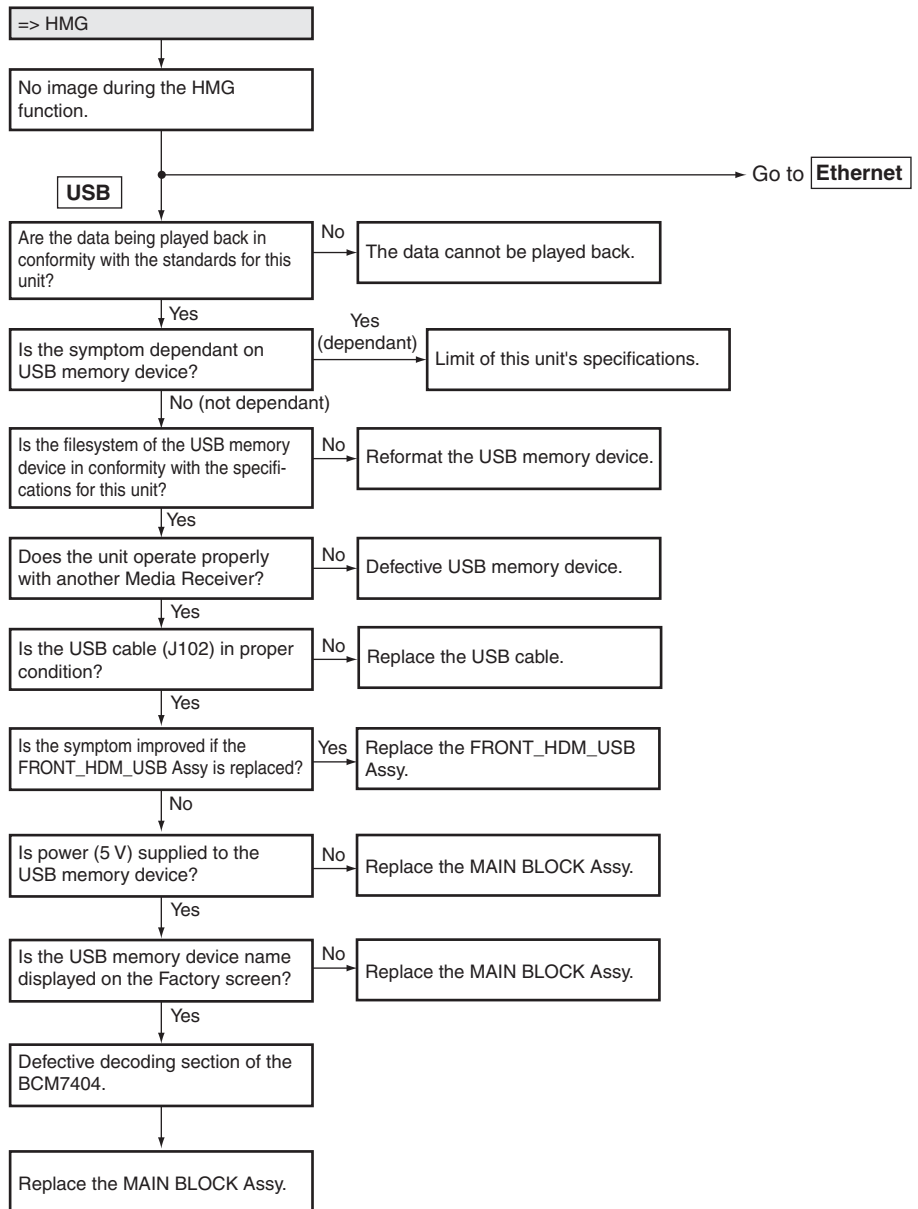
Audio PID : Audio PID of the program currently being received.

PCR PID : PCR PID of the program currently being received.

Video Format : Video Format of the program currently being received.

Aspect : Aspect ratio of the program currently being received.

Flowchart of Failure Analysis for The HMG



A

B

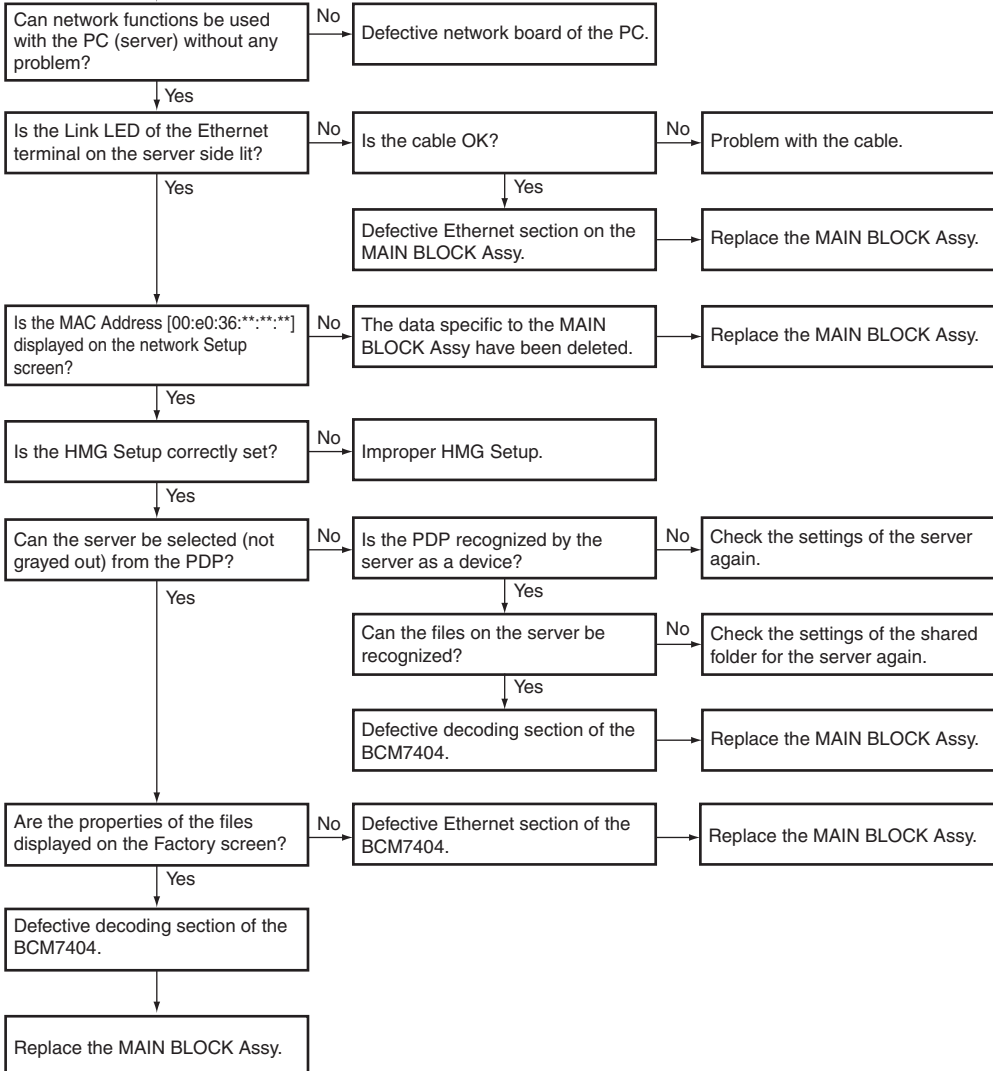
C

D

E

F

Ethernet



[HMG] How to enter DTB Service menu

Note: Use the remote control unit that supports Factory mode, because the DTB Service menu is accessible from Factory mode.

Step 1: Press the FACTORY key on the remote control unit to display the INFORMATION screen of Factory mode.

Step 2: Press the MUTING key on the remote control unit 4 times to display the INITIALIZE screen.

Step 3: Press the ↓ key on the remote control unit twice to display the “DTB SERVICE MODE (+)” indication at the bottom of the screen.

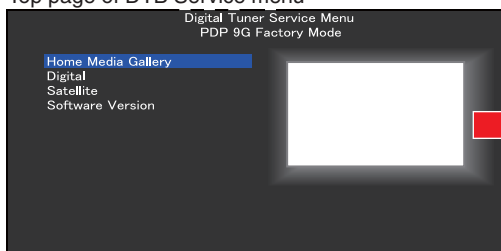
Step 4: Press the ENTER/SET key on the remote control unit to display the “MODE SHIFT <=>: No” indication at the bottom of the screen.

Step 5: Press the ← or → key on the remote control unit until the “MODE SHIFT <=>: YES” indication is displayed at the bottom of the screen.

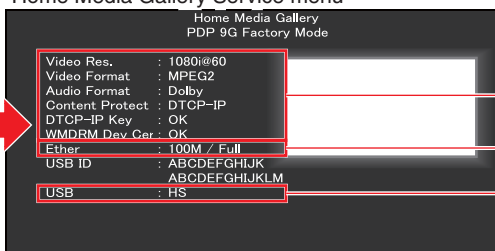
Step 6: Press and hold the ENTER/SET key on the remote control unit pressed for 5 seconds or more to activate DTB Service menu.

The Home Media Gallery (HMG) Service menu is indicated below:

Top page of DTB Service menu



Home Media Gallery Service menu



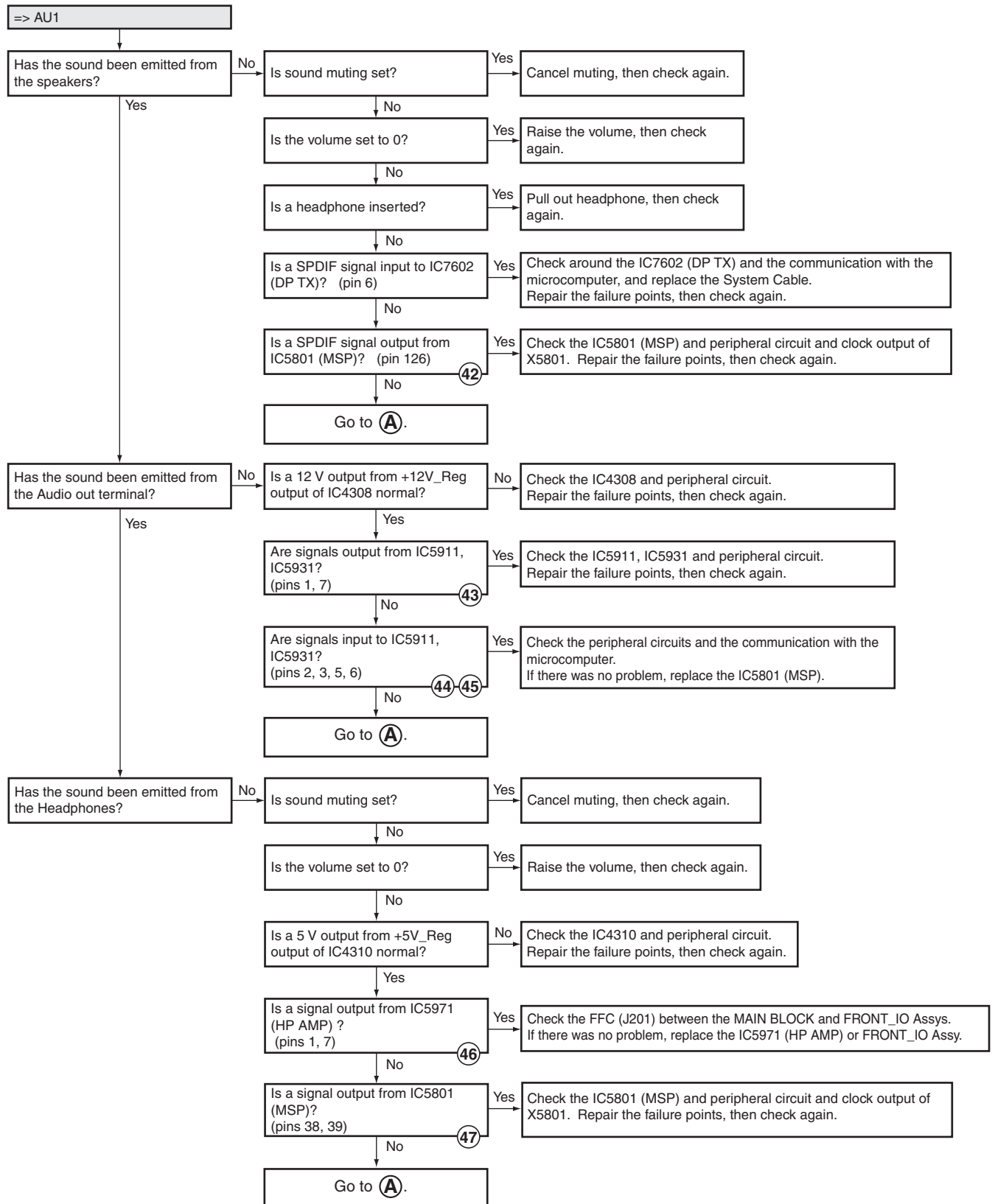
Content data

Ethernet connection information

USB device information

[5] AUDIO SYSTEM

Flowchart of Failure Analysis for The Audio System



A

A

Has the sound of the Analog broadcasting output?

No

Is a SIF signal input to IC5801? (pin 68)

No

Check the communications between the U5301 (FRONTEND) and the microcomputer and between the U5301 and IC5801. If there was no problem, replace the U5301 (FRONTEND), then check again.

Yes

Yes

Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace the IC5801 (MSP), then check again.

B

Has the sound of the Digital broadcasting output?

No

Is a I2S signal input to IC5801 (MSP)? (pins 100 to 102)

No

Is a signal output from IC6001 (BCM7404) of the MAIN BLOCK Assy?

No

Repair the DTB block or replace the MAIN BLOCK Assy.

Yes

Yes

Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace the IC5801 (MSP), then check again.

Check around IC6001 (BCM7404) and repair the failure points, then check again.

C

Has the sound of the HDMI output?

No

Check that the HDMI switch of the MENU is properly set.

No

Set a MENU definitely, then check again.

Yes

Yes

Is a SPDIF signal output from IC4901 (HDMI RX)? (pin 78)

No

Check the circuits between IC5001 (HDMI SW) and IC4901 (HDMI RX). If there was no problem, replace the MAIN BLOCK Assy.

INPUT_1, 3, 4

Yes

Check the FFC (J101) between MAIN BLOCK and FRONT_HDM_USB Assys. If there was no problem, replace the FRONT_HDM_USB Assy.

INPUT_5

Is a SPDIF signal input to IC5801 (MSP)? (pin 4)

No

Check the communications around the IC4901 (HDMI RX). If there was no problem, replace the MAIN BLOCK Assy.

Yes

Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace the IC5801 (MSP), then check again.

D

Has the sound of the INPUT 1, 3 (SCART) output?

No

Is a signal input to IC5801? (pins 24, 25, 36, 37)

No

Check the circuits between JA7502 (SCART) and IC5801. If there was no problem, replace the MAIN BLOCK Assy.

Yes

Yes

Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace the IC5801 (MSP), then check again.

E

Has the sound of INPUT 2 (SCART, RCA) output?

No

Is a signal input to IC5801 (MSP)? (pins 26, 27, 34, 35)

No

Check the FFC (J203) between the MAIN BLOCK and REAR_IO Assy. If there was no problem, replace the REAR_IO Assy.

Yes

Yes

Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace the IC5801 (MSP), then check again.

F

Has the sound of INPUT 5, PC (RCA) output?

No

Is a signal input to IC5801 (MSP)? (pins 30, 31)

No

Check the FFC (J201) between the MAIN BLOCK and FRONT_IO Assy. If there was no problem, replace the FRONT_IO Assy.

Yes

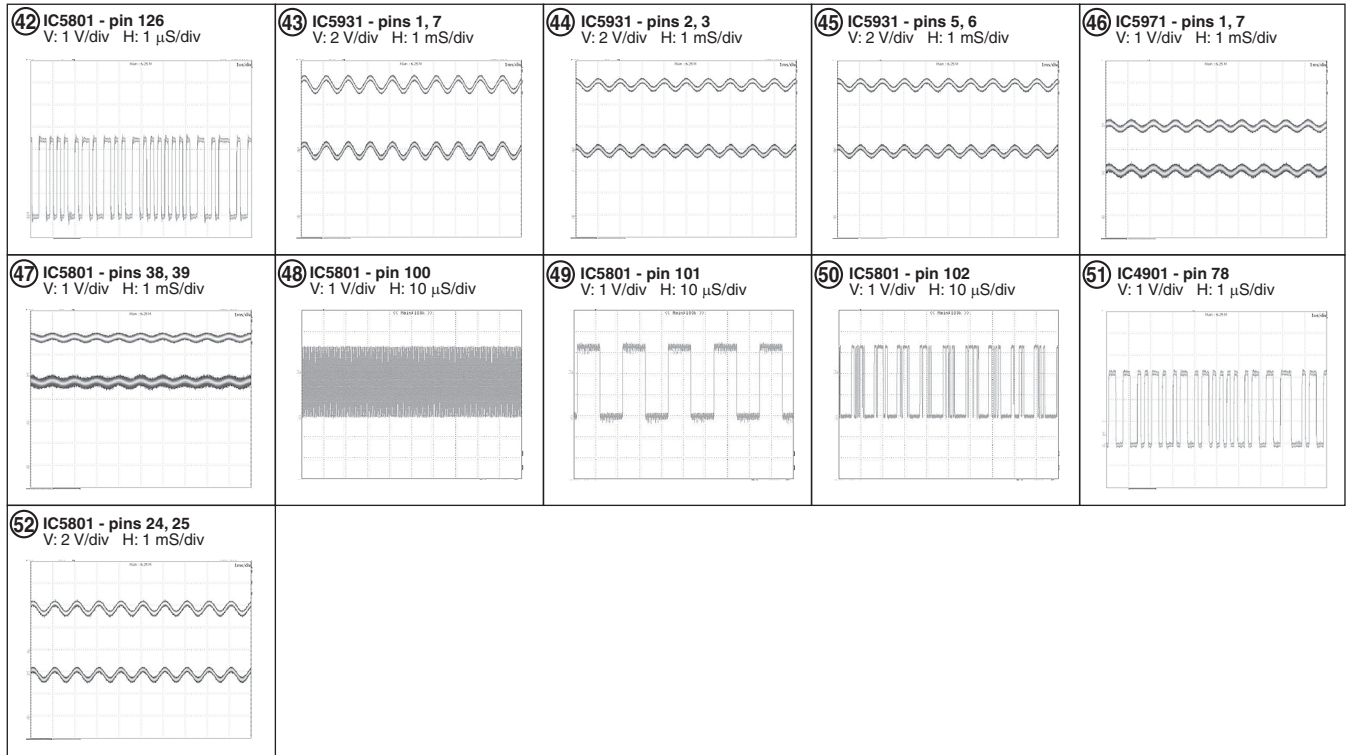
Yes

Check the communications around the IC5801 and between the IC5801 and the microcomputer. If there was no problem, replace the IC5801 (MSP), then check again.

A

Waveforms

Input signal: L/R 1 kHz, 0.5 Vrms (VOL 30)



B

C

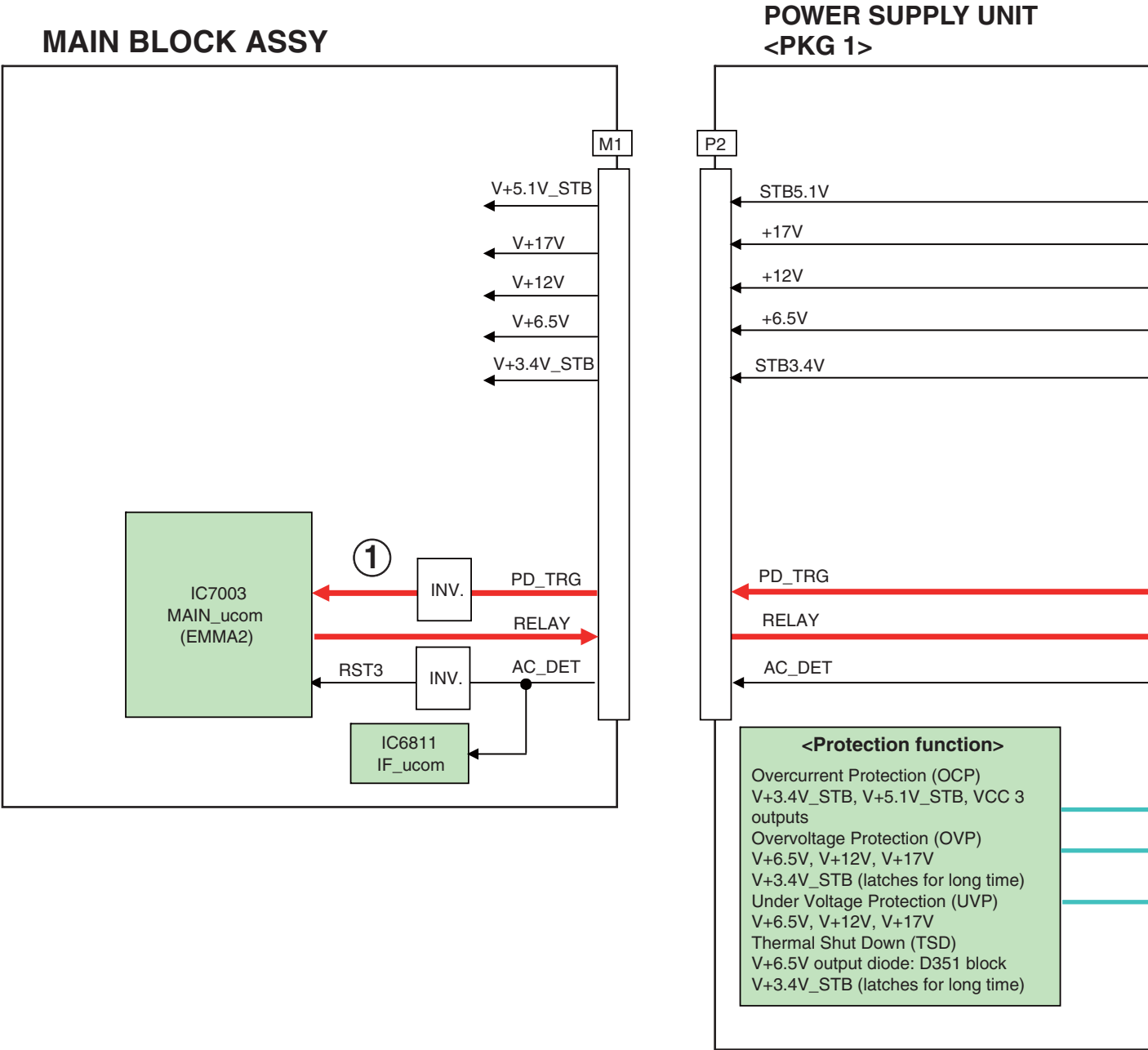
D

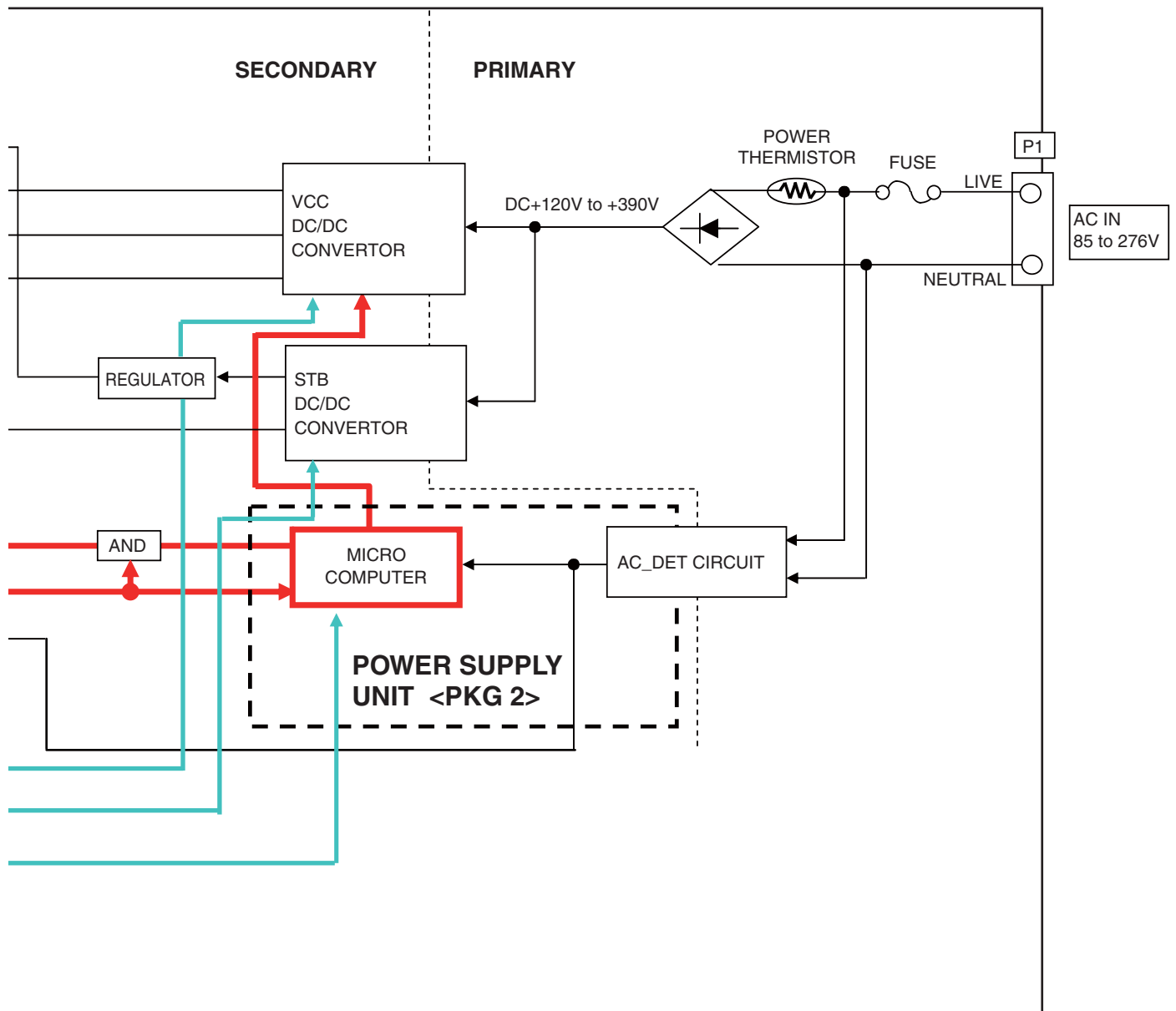
E

F

[1] BLOCK DIAGRAM OF THE POWER-DOWN SIGNAL

Note:
The figure ① indicate the number of times the Red LED flashes when power-down occurs in the corresponding route.





[2] PD (POWER-DOWN) DIAGNOSIS OF FAILURE ANALYSIS

How to Distinguish the PD (Power-Down)

About the LED for checking causes of power-down

No LED for checking causes of power-down is provided for the POWER SUPPLY Unit of the MR. However, by checking the waveforms at terminals of the microcomputer, whether a power-down was caused by failure in the POWER SUPPLY Unit, and if it was, which power system among the four was in failure can be inferred. The points at which to check waveforms and how to distinguish power-down causes are described below:

<Points at which to Check Waveforms>

Waveforms between Pin 3 of CN801 and GND (secondary radiator, display chassis, etc.) Refer to the section "Note on Removing the POWER SUPPLY Unit from the Chassis and Method for Resetting Standby Power Latchup" in the "7.2 DISASSEMBLY".

<How to Distinguish>

If a power-down was caused by failure in the POWER SUPPLY Unit, a pulse waveform is output at the above-mentioned points. (It is assumed that STB3.4 V power is properly output.)

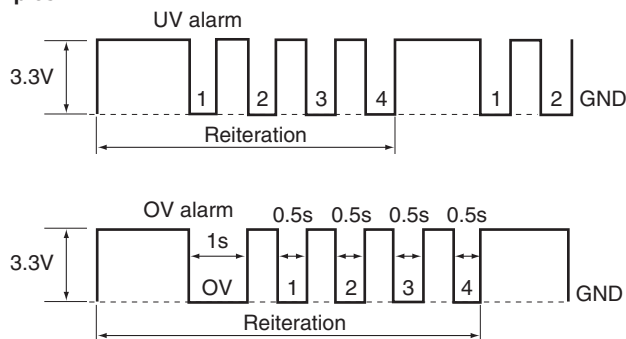
By counting the frequency of "Lo" in the pulse waveform, the cause of power-down can be identified.

Frequency of "Lo"	Cause	
	Output Voltage	Overvoltage (OV) or Undervoltage (UV)
Once	+12V	OV or UV *
Twice	+17V	OV or UV *
3 times	+6.5V	OV or UV *
4 times	Protection against overheat	

*How to distinguish OV and UV:

If the first "Lo" duration of a pulse is long (1 s), the cause is OV. As the three output voltages are electromagnetically linked and interact with one another, the frequency may vary among 1-3, depending on the type of power-down.

Examples:



How to Diagnose the PD

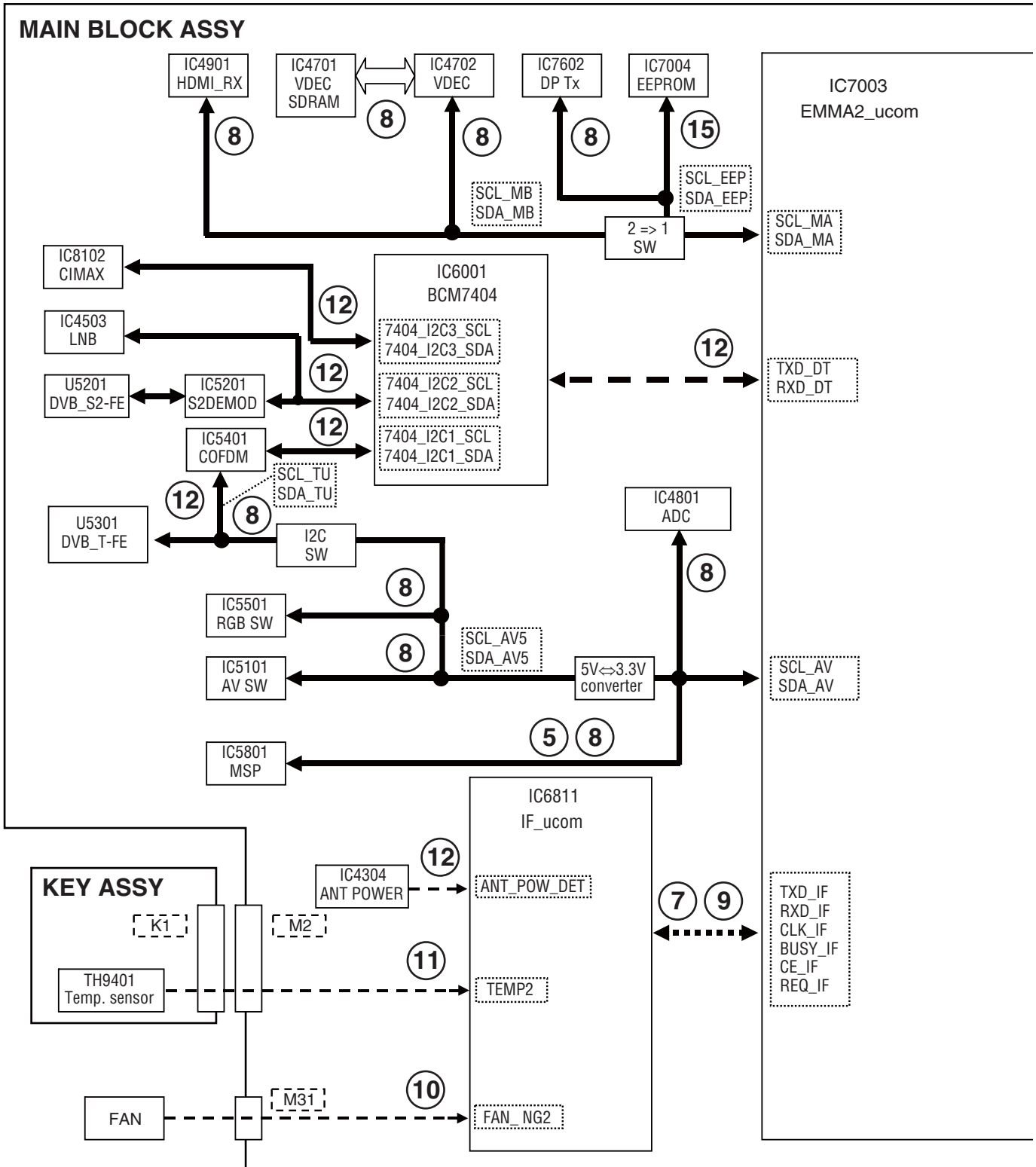
Frequency of LED Flashing	History Indication in Factory Mode	Assy	Cause of power-down (activated protection circuit)	Point to be Checked	Possible Defective Parts
Red, once	MR-PWR	MAIN BLOCK Assy	Overcurrent in 6.5 V power	5V_ANT-REG	IC4305, C4305
				5V_IO-REG	IC4310, C4301
				3CH-DD converter	IC4402 C4405, C4406, C4409, C4463, C4464, C4466 to C4468
				FET	Q4417, Q4416, Q4411
				1CH-DD converter	IC4501, C4517
			Overcurrent in 12 V power	FAN-REG	IC4302, C4342
				8V_IO-REG	IC4309, C4315
				LNB	IC4503
			Overcurrent in 17 V power	12V_IO-REG	IC4308, C4303
			Overcurrent in 3.4 V power	1.8V_IO-REG	IC4604, C4609 C4820, C8103
		POWER SUPPLY Unit	V+6.5V UVP	TP V+6.5V	Voltage drop due to overcurrent on the load side
			V+12V UVP	TP V+12V	Voltage drop due to overcurrent on the load side
			V+17V UVP	TP V+17V	Voltage drop due to overcurrent on the load side
			STB3.4V OCP	TP STB3.4V	C151, C153, C152, D152, or Z152, and abnormal current on the load side that is connected to STB3.4 V power
			STB5.1V OCP	TP STB5.1V	C155 and abnormal current on the load side that is connected to STB5.1 V power And abnormal current on the load side that is connected to STB5.1 V power
			VCC OCP	TP V+6.5V	D351, C351, C352, C353, and abnormal current on the load side that is connected to V+6.5V power
				TP V+12V	D352, C357, C358, and abnormal current on the load side that is connected to V+12V power
				TP V+17V	D353, C359, and abnormal current on the load side that is connected to V+17V power
			STB3.4V OVP	TP STB3.4V	PC121
			VCC OVP	TP V+6.5V TP V+12V	PC301, Breakage in the line to/from the P2 output connector
			STB3.4V TSD		Z121 control IC and abnormal current on the load side that is connected to STB3.4 V power
			V+6.5V Rectifier diode (D351) TSD		D351 or D352, and abnormal current on the load sides that is connected to V+6.5 V and V+12 V

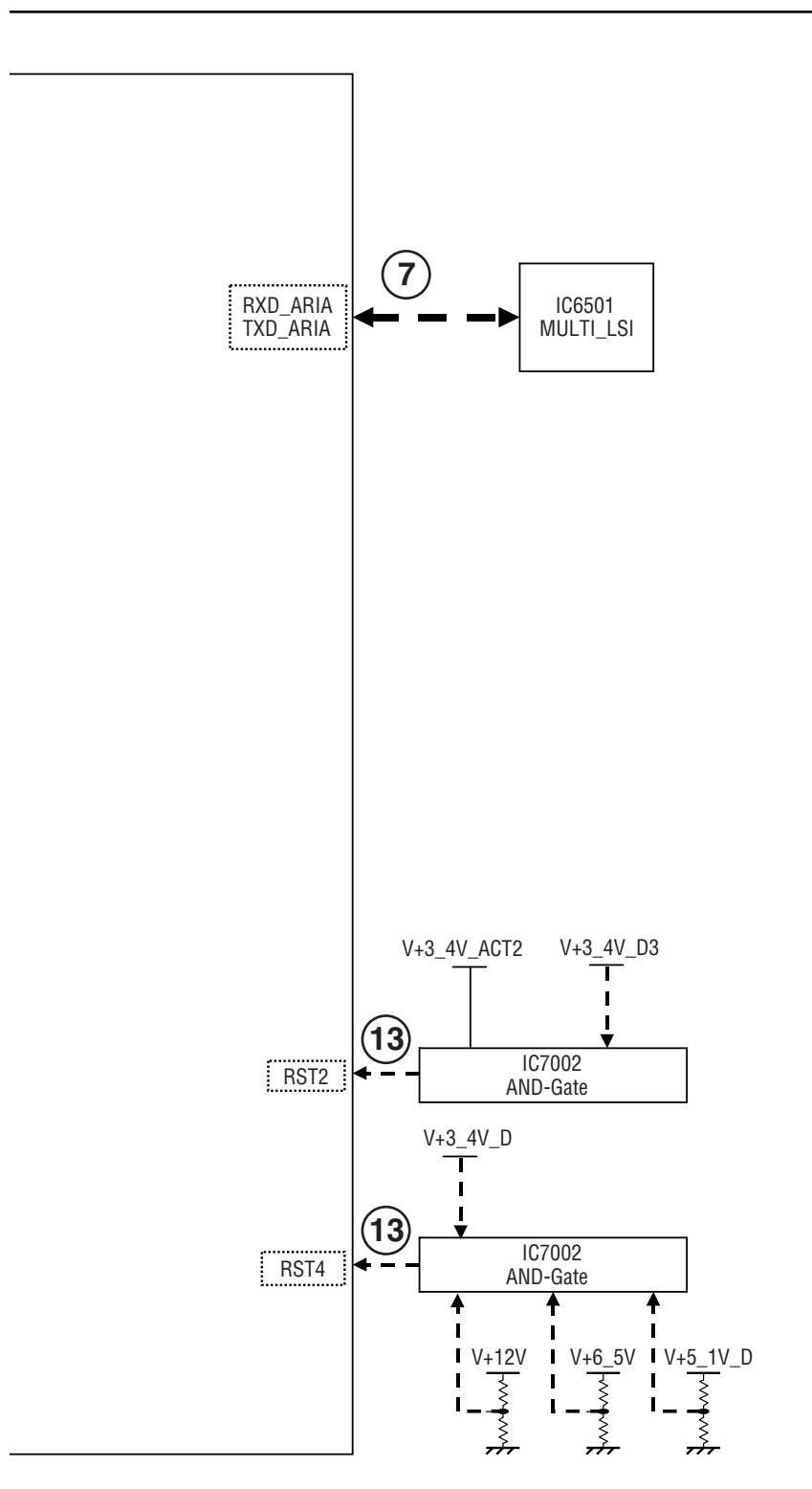
Note: Although replacement of the whole POWER SUPPLY Unit is required (replacement of only defective parts on the POWER SUPPLY Unit is not possible), the circuit symbols are described for reference

5.4 DIAGNOSIS OF SD (SHUTDOWN)

[1] BLOCK DIAGRAM OF THE SHUTDOWN SIGNAL

Note : The figures ① to ⑮ indicate the number of times the Blue LED flashes when shut-down occurs in the corresponding route. ⑫ LED is not flashed.





[2] SD (SHUTDOWN) DIAGNOSIS

Frequency of LED Flashing	Major Type	Detailed Type	Log Indication in Factory Mode		
			MAIN	SUB	
Blue 5	Audio	Abnormality in MSP	AUDIO	MSPMAP	
Blue 7	Failure in 3-wire serial communication with the main microcomputer	IF microcomputer	MA-3L	IF	
		MULTI		MULTI	
Blue 8	Failure in IIC communication with the main microcomputer	Tuner1	MA-IIC	FE1	
		MSP/MAP		MSPMAP	
		AV Switch		AV-SW	
		RGB Switch		RGB-SW	
		Main VDEC		VDEC	
		VDEC SDRAM		SDRAM	
		AD/PLL		ADC	
		HDMI		HDMI	
		DisplayPort Tx		DP-TX	
Blue 9	Failure in communication with the main microcomputer	—	MAIN	—	
Blue 10	Abnormality in FAN	FAN2	FAN	FAN2	
Blue 11	High temperature of the unit	—	TEMP2	—	
Blue 12 (Actually, Blue 12 LED is not flashed.)	Digital Tuner	DTV start up error	DTUNER	PS/RST	
		DTV communication error		RETRY	
		DEVICE ERR		DEVICE	
		Tuner1		DE-FE	
		DTV Antenna		D-ANT	
		Application		DTVAPP	
		COFDM		DEMODO	
		Tuner S2		DE-FES	
		S2DEMODO		DEMODO	
		LNB		DE-LNB	
		S2 Antenna		S-ANT	
Blue 13	Failure in the power supply	DC-DC Converter power decrease	RST-MA	M-DCDC	
		POWER SUPPLY		RELAY	
Blue 15	Main EEPROM	Main EEPROM communication error	MA-EEP	—	

A

Checkpoint	Possible Defective Part	Remarks
Power supply for MSP and MSP	IC5801, IC4604, Q4616	Check the MSP, its power and periphery parts (e.g. reset line).
Communication line between IF and MAIN	IC7003, IC6811	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
Communication line between MULTI and MAIN	IC7003, IC6501	Check the communication lines (TXD_ARIA/RXD_ARIA)
IIC communication line between Tuner and MAIN	U5301, IC7003	Check the communication lines (SCL_TU/SDA_TU or SCL_AV/SDA_AV)
IIC communication line between MSP/MAIN and MAIN	IC5801, IC7003	Check the communication lines (SCL_AV/SDA_AV)
IIC communication line between AV_SW and MAIN	IC5101, IC7003	Check the communication lines (SCL_AV5/SDA_AV5)
IIC communication line between RGB_SW and MAIN	IC5501, IC7003	Check the communication lines (SCL_AV5/SDA_AV5)
IIC communication line between M_VDEC and MAIN	IC4702, IC7003	Check the communication lines (SCL_MB/SDA_MB)
Communication line between VDEC and SDRAM	IC4701, IC4702	Check the communication lines (SDRAM), Failure in SDRAM
IIC communication line between ADC and MAIN	IC4801, IC7003	Check the communication lines (SCL_AV/SDA_AV)
IIC communication line between HDMI_RX and MAIN	IC4901, IC7003	Check the communication lines (SCL_MB/SDA_MB)
IIC communication line between DP_TX and MAIN	IC7602, IC7003	Check the communication lines (SCL_EEP/SDA_EEP)
Communication line between IF and MAIN	IC6811, IC7003	Check the communication lines (TXD_IF/RXD_IF/CLK_IF/BUSY_IF/CE_IF/REQ_IF)
Dirt attached to the fan motor		Check the fan. (SD10 does not detect it at the temperature that fans do not turn.)
Periphery of the FAN		FAN_NG
Periphery of the cable at M31		Check if cables are firmly connected.
Periphery of the fan control regulator	IC4302	Check that the voltage outputs it.
Ambient temperature		TEMP2 A shutdown occurs because of high temperature.
Temperature sensor or its periphery	TH9401	TEMP2
Periphery of the cable between M2 and K1	CN4204, CN9401	Check if cables are firmly connected.
Startup of BCM7404	IC6001	Check the startup of the BCM7404 and the communication line with MAIN
Communication line between BCM7404 and MAIN	IC6001	Check the startup of the BCM7404 and the communication line with MAIN
Periphery of the BCM7404	IC6001	
Front-end block	IC6001, U5301	Check the BCM7404, terrestrial tuner and periphery devices.
Antenna supply voltage	IC4304	Check the IC4304 (overcurrent detection IC), its periphery devices and antenna connection line.
DTV application	IC6001	
COFDM	IC5401	Check the communication line between BCM7404 and COFDM
Tuner S2	U5201	Check the communication line between S2DEMOD and F.E.
S2DEMOD	IC5201	Check the communication line between BCM7404 and S2DEMOD
LNB	IC4503	Check the communication line between BCM7404 and LNB IC, and check the periphery parts of LNB IC.
Antenna supply voltage	IC4503	Check the LNB IC and periphery parts, and antenna connection line.
RST2 V+3_4V_ACT2, V+3_4V_D3	IC7002	Check if each voltages are started.
RST4 V+12V, V+6_5V, V+5_1V_D, V+3_4V_D	IC7002	Check if each voltages are started.
V+12V, V+6_5V, V+17V	POWER SUPPLY Unit	Check if each voltages are started.
Check the cable M1	CN4203	Check if cables are firmly connected.
IIC communication line between EEPROM and MAIN	IC7004, IC7003	Check the communication lines (SCL_EEP/SDA_EEP)

C

D

E

F

5.5 NON-FAILURE INFORMATION

[1] INFORMATION ON SYMPTOMS THAT DO NOT CONSTITUTE FAILURE

Symptom	Cause, item to check, information
HDMI: Symptoms concerning the input format and settings	
The picture color for an INPUT 1 or 3 to 5 signal is not correct.	The color setting for INPUT 1 or 3 to 5 is not compatible with that of the output equipment. Check whether the color setting is YPbPr or RGB.
The video signal to INPUT 1 or 3 to 5 is not displayed, and a message is displayed.	A unsupported video signal is input.
The audio signal input to the INPUT 1 or 3 is not output. No HDMI signal is input.	The audio setting for INPUT 1 or 3 is any setting, and a video signal is not input. If the audio setting is any setting, to output an analog audio signal, the HDMI signal must be input. (If a DVI device is to be connected, use a DVI-HDMI conversion cable.) If the HDMI video signal is not input, the analog audio signal is not output.
No sound of signals to INPUT 1 or 3 to 5 is output.	The setting on the side of the HDMI output equipment is wrong. Example: Dolby Digital
The 1080p input signal is not displayed properly or at all, although the 1080i input signal is displayed properly.	Check that the connected cable supports HDMI Category 2. (As the clock frequency for the 1080p signal is triple that for the 1080i signal, signal degradation caused by a cable must not be neglected. A cable supporting HDMI Category 2 can be used for the 1080p signal. Although some conventional cables can support the 1080p signal, some others cannot.)
SCART video output	
The video output signal from the SCART connector is deteriorated. Or when the video output signal from the SCART connector is recorded, its playback picture is deteriorated.	The video signal output from the SCART connector is Macrovision protected.
The video signal is not output when the component signal is input to INPUT 2.	The video signal is not output from the SCART connector when the component signal is selected.
The video signal is not output when the video signal is input to INPUT 1 or 3 to 5.	The video signal is not output from the SCART connector when the HDMI signal is selected.
AUDIO OUT and SCART	
The image displayed on the PDP is not synchronized with the sound from the SCART.	The audio signal from the SCART connector is synchronized with the video output signal from the SCART connector. And the audio signal from the AUDIO OUT is synchronized with the video signal that is currently displayed.
DIGITAL OUT	
Playback of the signal from the DIGITAL audio output connector is possible, but recording is not possible.	The video signal output from the DIGITAL connector is copy-protected.
The digital audio output signal from the DIGITAL connector is not synchronized with that from the SCART video output.	The digital audio output signal from the DIGITAL connector is synchronized with the video signal that is currently displayed, and not with the SCART video output.
Miscellaneous	
The no-signal off function is not activated.	The no-signal off and no-operation off functions are effective only if video (composite, S video, component, HDMI [excluding PC]) input or TV input is selected.
The no-operation off function is not activated.	
Power management does not function.	Power Management is effective only while an analog PC signal is being input. It is not effective with HDMI-PC signal input.
The AUTO SETUP function is not activated.	The Auto Setup function is effective only while an analog PC signal is being input. This function does not work if an analog PC signal is not input, even if the INPUT PC is selected.
Control via the SR connector is not possible.	Wrong connection of the cable to the PC INPUT (AUDIO) connector is suspected.
The audio signal from the PC is not output.	Wrong connection of the cable to the SR connector is suspected.
The picture-quality setting (AV Selection) is not stored.	The picture-quality setting is stored for each input. As the setting is changed when another input is selected, the user may have a false idea that the setting is not stored.
The picture size changes arbitrary.	The Auto Size setting is set to ON.
The display position of the screen changes slightly while the screen is on.	The orbiter function for minimizing the effects of phosphor burn is activated. Although the setting for this function can be changed on the Home menu, retaining the factory setting is strongly recommended.
The video signal to the S video connector is not displayed.	As the signal input to the connector that has been selected on the INPUT SELECT submenu of the Home menu is selected (this does not apply to the connectors located on the side of the unit), check the menu setting. If the output signal is not available even if the input signal is properly selected, input a signal to other input functions, check the connecting cables, or check the settings for the connected equipment. Note that if cables are connected to both the HDMI connector and composite video connector of INPUT 5, the HDMI connector will have priority over the composite video connector.
The video signal to the composite video connector is not displayed.	

SUPPLEMENT: On the video setting for HDMI

There are three types of HDMI output formats: color difference 4:4:4, color difference 4:2:2, and RGB4:4:4. (The proportions, such as 4:4:4 and 4:2:2, represent those of the amount of data for video signal components. For example, as for color difference 4:4:4, the proportion of the amount of data as for Y, Cb, and Cr is 4:4:4.)

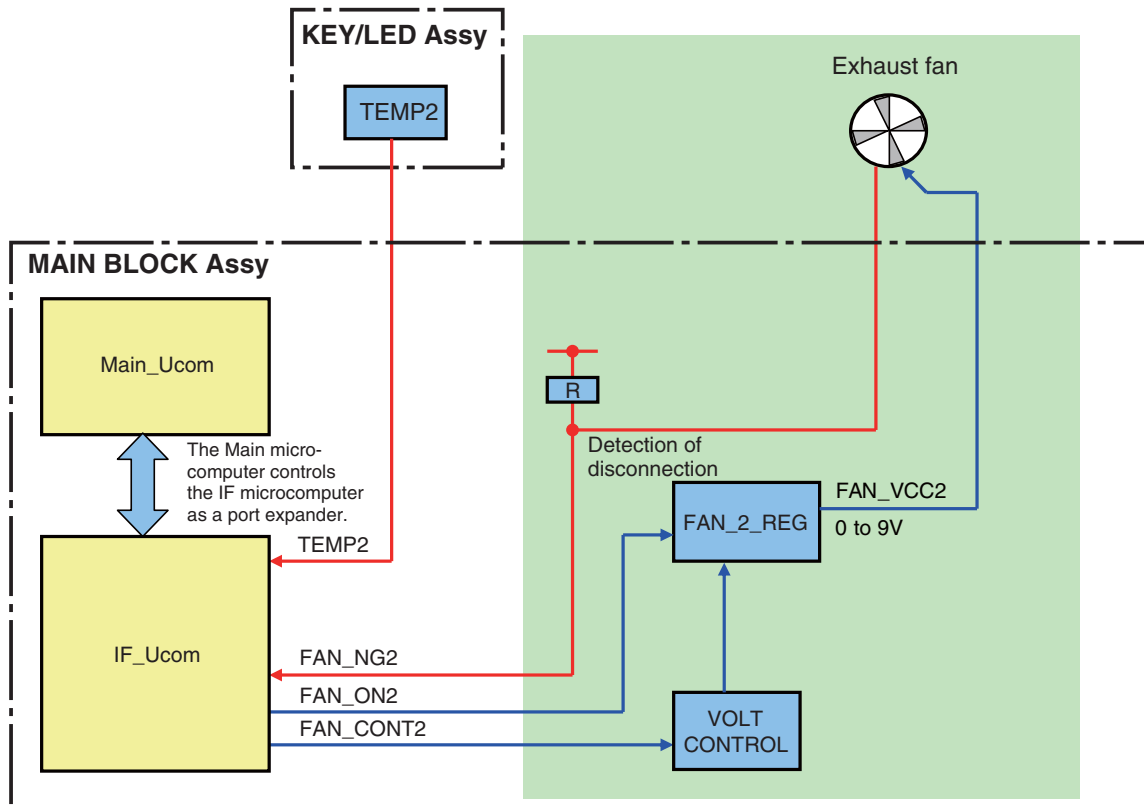
It is required to make the settings of the PDP according to the settings of the output equipment. For usual operation, however, set them to AUTO. If the color is inappropriate, make the settings manually.

In the HDMI system, video signals are coded at 24 bits per pixel and transmitted as a series of 24-bit pixels. In a case of color difference 4:4:4, Y, Cb, and Cr use 8 bits each. In a case of color difference 4:2:2, Y, Cb, and Cr use 12 bits each, but Cb and Cr are transmitted at a half sampling rate of Y. This unit is capable of processing the upper 10 bits out of 12 bits of video data. Recent high-end DVD players, such as Pioneer DV-79AVi, are capable of outputting 10-bit color-difference signals. In general, it is said that picture quality for color difference 4:2:2 format is assumed to be higher, because human eyes are more sensitive to luminance than to colors. In the case of RGB4:4:4, R, G, and B use 8 bits each.

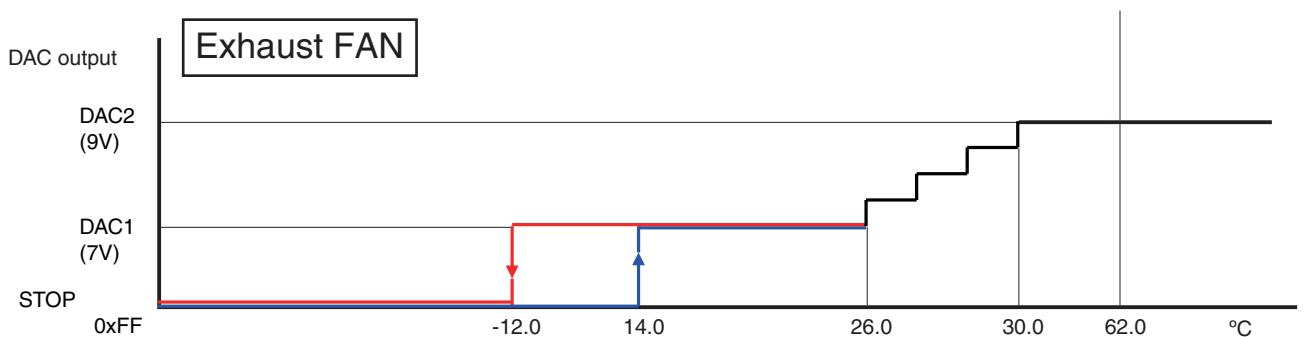
5.6 OUTLINE OF THE OPERATION

[1] SPECIFICATION OF THE FAN CONTROL

■ Block diagram



■ Operation specifications



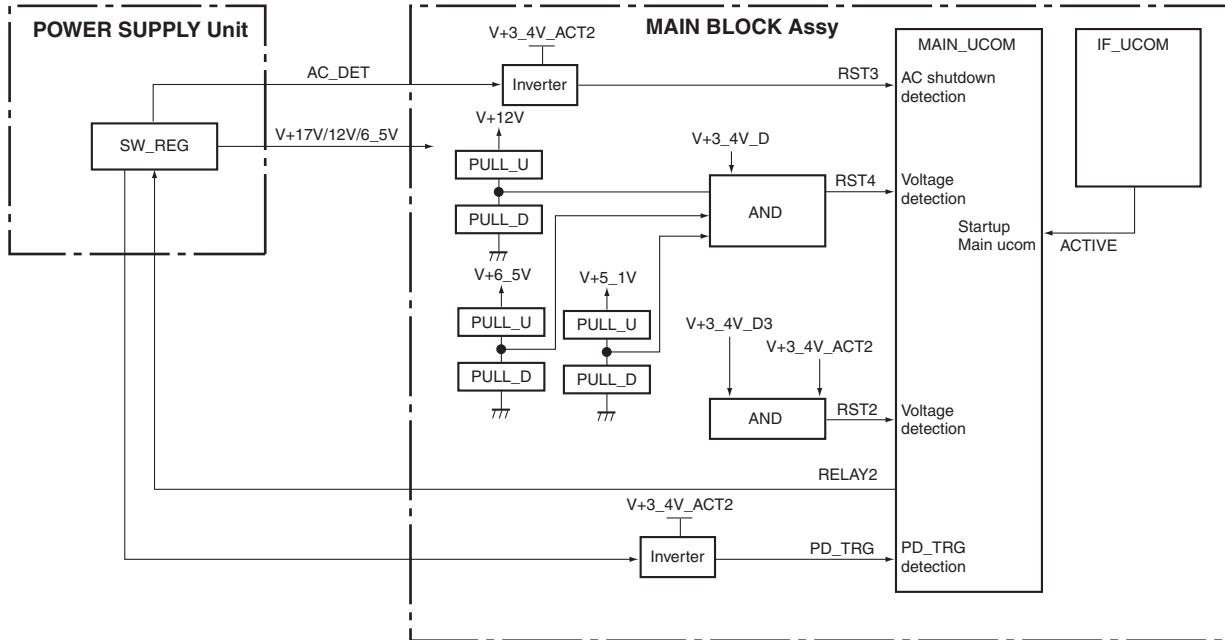
Notes:

- The operating temperature of the fan is different from the ambient temperature, because the sensor temperature is read by the microcomputer.
- The fan may not start rotating until the internal temperature of the unit reaches a certain level, such as immediately after the unit is turned on.
- When the temperature rises, the sensor voltage of TEMP2 decreases.
- When the voltage of the DAC output for exhaust FAN decreases, rotation speed of FAN rises.

[2] PROCESSING IN ABNORMALITY

Power supply and DC-DC converter

● Circuit configuration

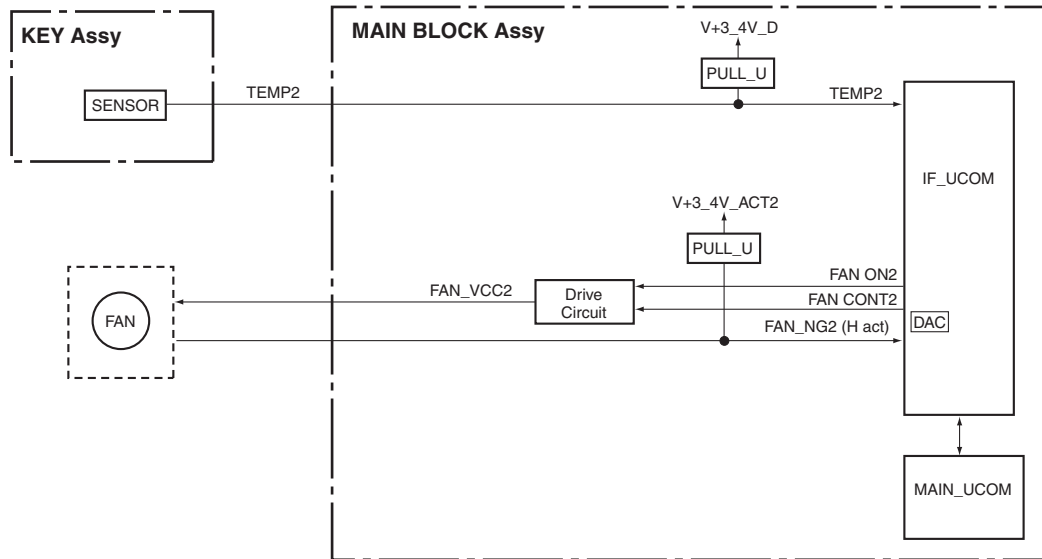


● Specifications for port monitoring

Port Name	SD/PD Indication	Determination Condition	Monitoring conditions	Operation
RST2	ASIC power (M-DCDC)	Shutdown occurs when the signal is "L." for 5 sec after PSW1 is ON. or for 2 sec while the unit is ON.	<ul style="list-style-type: none"> Panel screen ON (RST4 = H and PSW1 = H) While awaiting restoration of RST2 (RST2 = L) 	Shutdown occurs immediately Blue LED flashes 13 times
RST3	—	—	Excepting passive standby	If "RST3 = H" (AC_OFF) is detected under the monitoring conditions, a power-off process starts. Monitoring of the RST3 port is continued, and monitoring of other ports is interrupted. Communication is controlled only by the IF microcomputer. The port outputs are set as specified. If the signal at the RST3 port continues to be H after 30 mS of waiting, monitoring is continued. If RST3 is L, a restoration process starts according to the latest power-on/-off status.
RST4	MAIN power (RELAY)	Shutdown occurs if the signal is "L." for 5 sec after RELAY2 is ON. or for 2 sec while the unit is ON or in Functional STB.	RELAY2 = ON (High)	Shutdown occurs immediately Blue LED flashes 13 times
PD_TRG	VCC power (MR-PWR)	Shutdown occurs when the signal is continuously "L" for 30msec * 3 times after RELAY2 is ON.	<ul style="list-style-type: none"> RELAY2 = ON Monitor it after 3 sec. 	Power-down occurs immediately Red LED flashes once

Fan and temperature sensor

● Circuit configuration

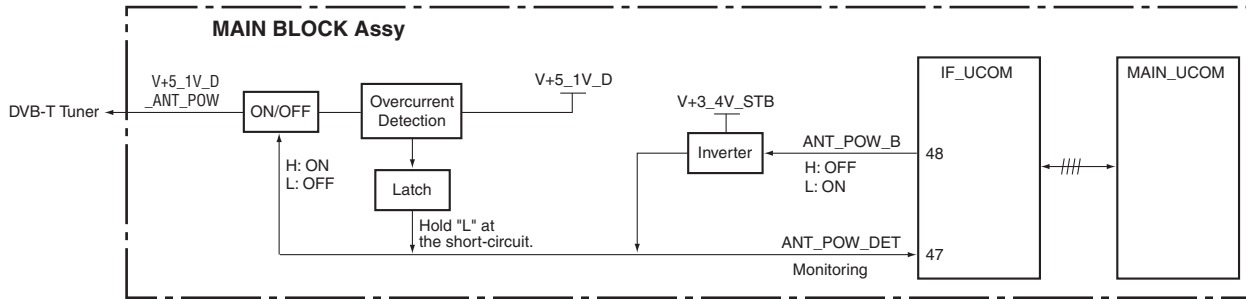


● Specifications for port monitoring

Port Name	SD/PD Indication	Determination Condition	Monitoring conditions	Operation
FAN_NG2	FAN	Shutdown occurs when the signal is "H." 1 S * 3 times	RST4 = H and FAN_ON2 = H (Monitoring starts 3 sec after the above conditions are established.)	Shutdown occurs immediately Blue LED flashes 10 times
TEMP2	High temperature at MR	Shutdown occurs if any values equal to or greater than minimum to require a shutdown are detected. 1 S * 3 times	RST4 = H (Monitoring starts 1 sec after the above conditions are established.)	In the Panel screen ON: Shutdown occurs after the warning indication is displayed for 30 sec. In the Functional STB: Shutdown occurs immediately Blue LED flashes 11 times

Power supply for DVB-T Antenna for Europe

● Circuit configuration



● Specifications for port monitoring

Port Name	SD/PD Indication	Determination Condition	Monitoring conditions	Operation
ANT_POW_DET	DTB antenna short-circuited	Warning message is displayed when the signal is L (100 mS, 3 times)	RST4 = H and ANT_POW_B = L (Monitoring starts 1 sec after the above conditions are established.)	Output of a warning message for 60 sec.

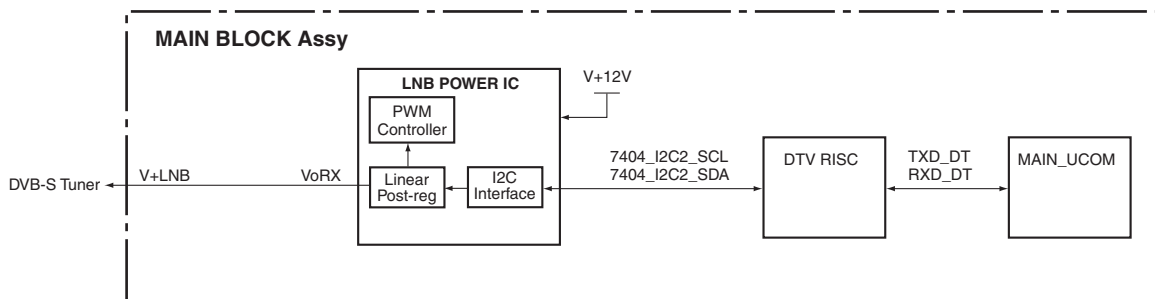
● Conditions of circuit reset

The circuit can be reset by unplugging then plugging the power cord back in (it will not be reset by Standby ON/OFF).

Power supply for DVB-S Antenna for Europe

● Circuit configuration

Note: Specifications for the output of warning-message indication will be added in the future.



● Specifications for port monitoring

Port Name	SD/PD Indication	Determination Condition	Monitoring conditions	Operation
—	S2 antenna short-circuited	Notification from DTV (at 7404_I2C2, OR of OLF bit and OTF bit of the LNB IC System Register is 1)	RST4: "H" and during reception of satellite broadcast	Output of a warning message for 60 sec. Only while a satellite broadcast program is displayed on the main screen.

● Conditions of circuit reset

The circuit will be automatically reset after an error, such as short-circuiting of the antenna, is resolved and the unit is restored.

[3] HOW TO OPERATE THE MEDIA RECEIVER SEPARATELY

● Necessary items for operation

- Media Receiver
- DP-to-HDMI conversion jig: GGF1627 (with the AC adaptor)
AC adaptor INPUT: 100 V to 240 V, 50/60 Hz, 0.3 A
OUTPUT: DC 6 V, 1.8 A $\ominus \text{---} \text{---} \oplus$
- Monitor or TV (with which an image with resolution of 1920 × 1080 p, 60 Hz can be displayed, with HDMI input)
Note: When checking with DVI monitor, setting change of this jig is required.
- DP cable (GGP1117) and HDMI cable
- G8 or G9 remote control unit (in case of controlling by remote control unit)
- PC and RS-232C straight cable (in case of controlling by PC)
- HDMI -DVI cable (in case of connecting with DVI monitor)

● Connection

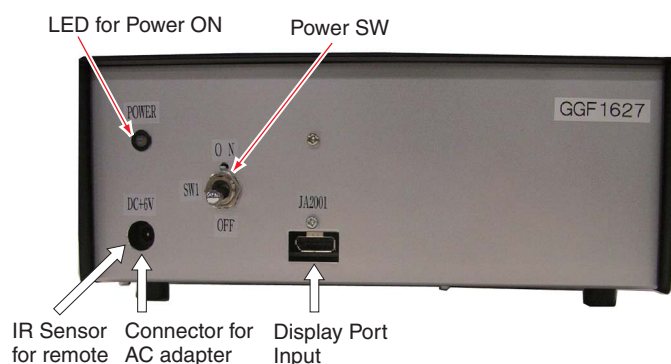


Fig.1 DP - HDMI Conversion tool (Front side)

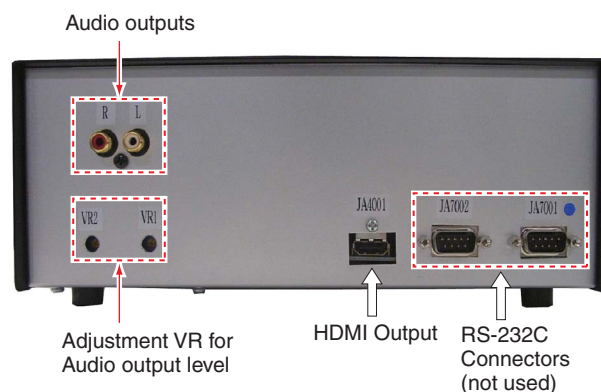


Fig.2 DP - HDMI Conversion tool (Rear side)

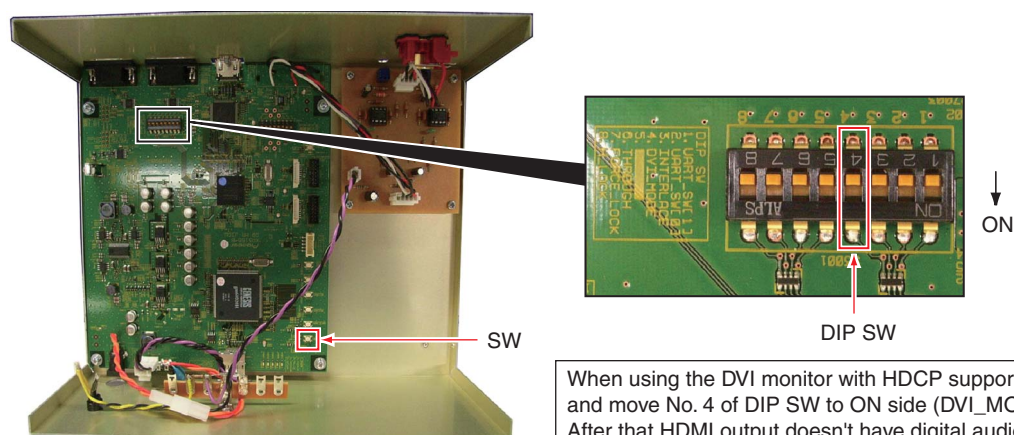


Fig.3 DP - HDMI Conversion tool
DIP SW Setting (output mode setting for HDMI connector)

A

● Preparation

- Set the MR from System Operation mode to Standalone Operation mode.
The MR is normally set to System Operation mode. If the MR is turned on in this mode, an error warning is issued (the red and blue LEDs alternately flash), and it cannot be operated properly.

To change to Standalone Operation mode, proceed as follows:

[With an RS-232C command]

1. Turn the MR on. (The red and blue LEDs alternately flash to warn of an error.)
2. In this state, send the MRMS01 command via RS-232C ports.
3. Turn the MR off.

When the MR is turned on next time or after, it will be in Standalone Operation mode.

[With the keys on the MR]

1. Set the MR to Standby mode.
2. Press and hold the INPUT key of the MR pressed for at least 5 seconds.
(This step is for giving a startup trigger in a case where the MR was in Passive Standby mode.)
3. Within 5 seconds after the INPUT key is released, press and hold the CHANNEL - key of the MR for at least 10 seconds.
4. After the modes are changed, the red LED flashes twice then is lit (the unit enters Normal Standby mode).
5. Turn the unit off.

When the MR is turned on next time or after, it will be in Standalone Operation mode.

C

● Operation

After the setting in Preparation is completed, turn the units on in the following order then perform analysis:

1. Turn the monitor or TV on. (Set the input mode to HDMI.)
2. Turn the DP-to-HDMI conversion jig on.
3. Turn the MR on.

If no image is displayed on the monitor or TV after the MR is turned on, press and hold the switch on the DP-to-HDMI conversion jig for about 1 sec.

● How to control the MR

- With the remote control unit:

The infrared receiver (IR) sensor for remote control unit is placed inside of the jig. Please point the remote towards the AC adaptor connector on the jig.

Unlike normal products, sensor reception of this tool is not so sensitive due to reduce interference with another Pioneer Plasma TV.

Please keep the distance between the remote control unit and the sensor less than 15cm.

- With RS-232C commands:

Connect a PC to the MR via their RS-232C ports and send RS-232C commands from the PC. (Baud rate: 9600 bps)

E

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● After analysis is finished

After analysis in Standalone Operation mode is finished, before returning the MR to the customer, be sure to return the unit to System Operation mode, as shown in the procedures below.

If it remains in Standalone Operation mode, when it is connected with the customer's monitor, the monitor will detect a connection error and not operate properly, and no image will be displayed.

To set the MR to System Operation mode, proceed as follows:

[With an RS-232C command]

1. Turn the MR on.
2. Send the MRMS00 command via RS-232C ports.
3. Turn the MR off.

When the MR is turned on next time or after, it will be in System Operation mode.

4. Connect the MR directly with the monitor and check that they operate properly.

[With the keys on the MR]

1. Set the MR to Standby mode.
2. Press and hold the INPUT key of the MR pressed for at least 5 seconds.
(This step is for giving a startup trigger in a case where the MR was in Passive Standby mode.)
3. Within 5 seconds after the INPUT key is released, press and hold the CHANNEL + key of the MR for at least 10 seconds.
4. After the modes are changed, the red LED flashes twice then is lit (the unit enters Normal Standby mode).
5. Turn the unit off.

When the MR is turned on next time or after, it will be in Standalone Operation mode.

● Products whose proper operation has been proved when HDMI connection is performed with this MR

Model Number	Manufacturer	Built-in Audio AMP
PDP-5000EX	Pioneer	○ (SP is required)
G8	Pioneer	○ (SP is required except 42 inch)
FP241WJ	BenQ	× (External audio amp and SP is required)
3008WFP	DELL	× (External audio amp and SP is required)
HD2441W	EIZO NANAO	× (External audio amp and SP is required)

● Attention point for audio volume

Audio output level is connected with MR volume level. If VR level of a MR is normal (around 10 - 15) and displayed HDMI TV or audio AMP is not so high level, sound level is very low. Please turn up the volume to appropriate level either or both units.

In case of turning up volume of MR to very high level during testing, turn down it to normal level and then turn off the unit. Otherwise when connecting the MR with panel, very loud sound is output from speakers and it might be a danger.

● Attention point when using another Pioneer Plasma TV

Please pay attention to interference of IR signal when using Pioneer plasma TV as HDMI monitor.

If remote signal is also received to Pioneer plasma TV when operating MR with this tool and remote, you might confuse of which unit is controlled by the remote.

The following methods are some of suggestions to control only MR with the conversion tool.

Using the remote control unit and the conversion tool (AC adaptor connector) as nearly as possible hiding remote sensor of the plasma TV temporally.

● Setting Method to connect with DVI monitor with HDCP support (DVI mode)

1. Open bonnet with power off condition.
2. Refer to Fig. 3, move the DIP SW No. [4] to ON side.
After this setting, DVI mode signal is output from HDMI output connector of HDMI.

Note: 1. Some of DVI monitors might not display output signal from this conversion tool.
2. Output signal does not contain digital audio signal.

5.7 OUTLINE OF RS-232C COMMAND

A

[1] PREPARED TOOLS

- It is necessary to prepare the following one to use 232C command.
- PC
 - Application for control
 - 232C cable (straight)
- * The setting of the Com port cannot be communicated if it doesn't do correctly.
(Please follow a set explanation of PC in the Com port)

B

■

[2] USING RS-232C COMMANDS

Individual ports are provided for RS-232C and SR+ connectors with this model. Therefore, unlike the case of previous models, which required switching of exclusive operation between these connectors on the Integrator menu, switching is no longer required.

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5.8 LIST OF RS-232C COMMANDS

RS-232C command list

Command Name		Function	Last Memory	Effective only in Factory mode	Remarks
A					
AMT	S00	Audio mute OFF			
	S01	Audio mute ON			
C					
CHN	FWD	Changing tuner preset channel (1 step forward)			
	REV	Changing tuner preset channel (1 step reverse)			
CHM		Clearing data of the hour meter		●	Last memory is performed to the panel side.
CHR		Clearing data of the hour meter of MTB/MR side			Clear the hour meter of screen display of MAIN NG.
CNG		Clearing data of the SD history of MTB/MR side			
D					
DPT		Rewriting the Display Port Tx			
DW*		To subtract * to the adjustment value (* = 0 to 9, subtract 10 with DW0 and set to minimum value with DWF)			
F					
FAN		Factory mode: OFF		●	
FAY		Factory mode: ON			
FST	S35	Set each memory setting of MTB/MR side to the shipment state.		●	
I					
INA	***	Switching the terrestrial analog signal, direct tuning (***: channel number)	MAIN		
		Switching the terrestrial analog signal (Channnel is in the last.)	MAIN		
INC	***	Switching the terrestrial digital signal, direct tuning (***: channel number)	MAIN		
		Switching the terrestrial digital signal (Channnel is in the last.)	MAIN		
IND	***	Switching the satellite digital signal, direct tuning (***: channel number)	MAIN		
		Switching the satellite digital signal (Channnel is in the last.)	MAIN		
INH		Switching the Home Media Gallery / Home Gallery			
INP	S01	Input: INPUT1	MAIN		
	S02	Input: INPUT2	MAIN		
	S03	Input: INPUT3	MAIN		
	S04	Input: INPUT4	MAIN		
	S05	Input: INPUT5	MAIN		
	S06	Input: INPUT6 (PC)	MAIN		
M					
MRM	S00	Setting the mode to normal operation	MAIN	●	
	S01	Setting the mode to standalone operation	MAIN	●	
MST	S00	Display one screen			
	S01	PsideP (Main size: normal)			
	S02	PinP (Right down)			
	S03	PinP (Right up)			
	S04	PinP (Left down)			
	S05	PinP (Left up)			
	S08	SWAP (Exchanging sub-screen)			
O					
OSD	S00	OSD setting: OFF	MAIN		
	S01	OSD setting: ON	MAIN		
P					
POF		Power: OFF	MAIN		
PON		Power: ON	MAIN		
PUC	S00	PURE CINEMA: OFF	MAIN	●	
	S01	PURE CINEMA: Standard	MAIN	●	
	S02	PURE CINEMA: Advance	MAIN	●	
	S03	PURE CINEMA: Smooth	MAIN	●	
Q					
QMT		Acquiring temperature of MTB/MR side and Fan speed			
QNG		Acquiring shutdown information of MTB/MR side			
QS1		Acquiring unit data, such as the software version			
QSE		Acquiring unit data, such as the software version of MTB/MR side (specific destination)			

A

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Command Name		Function	Last Memory	Effective only in Factory mode	Remarks
S					
SDF	S00	SRS DEFINITION: OFF			
	S01	SRS DEFINITION: DEFINITION1			
	S02	SRS DEFINITION: DEFINITION2			
	S03	SRS DEFINITION: DEFINITION3			
SML	***	Adjustment of the side mask level	MAIN	●	
SRS	S00	SRS: OFF			
	S01	SRS: SRS1			
	S02	SRS: SRS2			
	S03	SRS: SRS3			
SZM	S00	Setting the screen size to Dot by Dot	MAIN		
	S01	Setting the screen size to 4 :3	MAIN		
	S02	Setting the screen size to FULL or FULL 1080i	MAIN		
	S03	Setting the screen size to ZOOM	MAIN		
	S04	Setting the screen size to CINEMA	MAIN		
	S05	Setting the screen size to WIDE or WIDE1	MAIN		
	S06	Setting the screen size to FULL 14:9	MAIN		
	S07	Setting the screen size to CINEMA 14:9	MAIN		
	S11	Setting the screen size to AUTO	MAIN		
	S12	Setting the screen size to WIDE2	MAIN		
T					
TBS	S00	TRUBASS: OFF			
	S01	TRUBASS: TRUBASS1			
	S02	TRUBASS: TRUBASS2			
	S03	TRUBASS: TRUBASS3			
U					
UP*		To add * to the adjustment value (* = 0 to 9, add 10 with UP0 and set to maximum value with UPF)			
V					
VOL	UP*, DW*, ***	To adjust the volume			Use this command by designating the adjustment value *** (=000 to 060).
Z					
ZME	***	Initializing the video EEPROM data of the MTB/MR side		●	

5.9 DETAILS OF RS-232C COMMANDS

[1] QS1 (Software Version Information of the Microcomputer)

Model information and version information are returned.

Command Format	Effective Operation Modes	Function	Remarks
[QS1]	Every Time	Output of status	Return data: 3 (ECO) + 112 (DATA) + 2 (CS) = 117 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QS1
1	Resolution/Size	1 byte	F
2	Panel Generation	1 byte	9
3	Destination	1 byte	*
4	Grade	1 byte	*
5	Product Form	1 byte	A
6	Boot version of Module microcomputer	3 byte	-01A
7	Program version of Module microcomputer	8 byte	-01A ' ' ' '
8	Boot version of sequence processor	3 byte	-01Z
9	Program version of sequence processor	8 byte	-01Z ' ' ' '
10	Panel information	8 byte	G9_50F_2
11	Derivative operation identification	1 byte	*
12	Reserved (panel section)	7 byte	*****
13	, (comma)	1 byte	,
14	MTB generation	1 byte	9
15	MTB destination	1 byte	A
16	MTB grade	1 byte	H
17	MTB product form	1 byte	B
18	Program version of IF microcomputer	8 byte	-01A
19	Boot version of IF microcomputer	4 byte	01A
20	Program version of Main microcomputer	8 byte	-01A
21	Boot version of Main microcomputer	4 byte	01A
22	Common version of ASIC	8 byte	-01A
23	Boot version of ASIC	8 byte	01A
24	PRS version of ASIC	8 byte	-01A
25	PIC version of ASIC	8 byte	-01A
26	Common version of the Digital Tuner	8 byte	-0A
27	Boot version of the Digital Tuner	4 byte	01A
CS	2 Byte	2 byte	4A

11: Derivative Operation Identification	
*	Standard model operation
1	Derivative model operation

14: MTB Generation	
9	G9

15: MTB Destination	
A	North America
C	China
E	Europe
G	General
J	Japan
U	Australia

16: MTB Grade	
H	Elite/One body Europe HD /System Europe HD/One body Australia
T	Regular/One body Europe SD
D	Derivative Model
*	No Grade (Japan/General/China)

17: MTB Product Form	
B	One body model
S	System model

1: Resolution/Size	
F	50-FHD (1920*1080)
G	60-FHD (1920*1080)

2: Panel Generation	
9	G9

3: Destination	
*	Commonness

4: Grade	
*	Commonness
Z	Evaluation

5: Not used	
A	"A" fixed

10: Panel Information (8 Byte)		
1 to 2nd byte	G9	Generation information
4 to 5th byte	50	50 inch
	60	60 inch
6th byte	F	FHD
8th byte	3	50 inch 2nd PLANT (Reserved)
	2	50 inch 2nd PLANT
	1	50 inch 1st PLANT
	'	Others

' = space

[2] QSE (DESTINATION PECULIAR INFORMATION)

Induce it peculiar, individual information is acquired.

Command Format	Effective Operation Modes	Function	Remarks
[QSE]	Every time	Output of status	Return data: 3 (ECO) + 32 (DATA) + 2 (CS) = 37 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QSE
1	Check flag for production	1 byte	E
2	Reserved	3 byte	***
3	DTB hardware version	4 byte	0342
4	User setting password	4 byte	1234
5	DP Tx firmware version	16 byte	123456789ABCDEFGH
6	DP Tx hardware version	4 byte	ABCD
CS	Check Sum	2 byte	13

[3] QMT (STATUS INFORMATION OF MTB/MR SECTION)

Temperature information on the MTB/MR section is acquired.

Command Format	Effective Operation Modes	Function	Remarks
[QMT]	Every time	Output of status	Return data: 3 (ECO) + 8 (DATA) = 11 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QMT
1	A/D value of temperature of MTB/MR section	3 byte	276
2	Reserved (*1)	1 byte	1
3	Reserved	4 byte	****

*1 Although the numerics 0, 1, and 2 can be input, those input values are invalid.

[4] QNG (SHUTDOWN INFORMATION OF MTB SECTION)

The command QNG is for acquiring the data from the 8 latest shutdown (SD) logs of the MTB section.

Command Format	Effective Operation Modes	Function	Remarks
[QNG]	Every time	To acquire data on the shutdown (NG) logs of MTB side	Return data: 3 (ECO) + 96 (DATA) + 2 (CS) = 101 Byte

Data Arrangement		Data Length	Output Example
ECO		3 byte	QNG
1	Latest SD data	1 byte	1
2	Latest SD subcategory data	1 byte	0
3	Data from the MTB hour meter for the latest SD	7 byte	0752013
4	Reserved	3 byte	000 fixed
5	Second latest SD data	1 byte	5
6	Second latest SD subcategory data	1 byte	1
7	Data from the MTB hour meter for the second latest SD	7 byte	0495204
8	Reserved	3 byte	000 fixed
9	Third latest SD data	1 byte	A
10	Third latest SD subcategory data	1 byte	2
11	Data from the MTB hour meter for the third latest SD	7 byte	0365814
12	Reserved	3 byte	000 fixed
13	Fourth latest SD data	1 byte	5
14	Fourth latest SD subcategory data	1 byte	0
15	Data from the MTB hour meter for the fourth latest SD	7 byte	0256612
16	Reserved	3 byte	000 fixed
17	Fifth latest SD data	1 byte	7
18	Fifth latest SD subcategory data	1 byte	2
19	Data from the MTB hour meter for the fifth latest SD	7 byte	0105628
20	Reserved	3 byte	000 fixed
21	Sixth latest SD data	1 byte	B
22	Sixth latest SD subcategory data	1 byte	0
23	Data from the MTB hour meter for the sixth latest SD	7 byte	0003009
24	Reserved	3 byte	000 fixed
25	Seventh latest SD data	1 byte	C
26	Seventh latest SD subcategory data	1 byte	1
27	Data from the MTB hour meter for the seventh latest SD	7 byte	00002A9
28	Reserved	3 byte	000 fixed
29	Eighth latest SD data	1 byte	C
30	Eighth latest SD subcategory data	1 byte	4
31	Data from the MTB hour meter for the eighth latest SD	7 byte	0000012
32	Reserved	3 byte	000 fixed
CS	2 Byte	2 Byte	7D

A

< SD Information No. >

Frequency *	Shutdown Factor	Remarks (Operation)
1	Failure of Power Supply of VCC	Immediately Shutdown
5	Abnormality in MSP	Go to No. 5 Subcategory Information
6	Failure of communication with Module microcomputer	Immediately Shutdown
7	Failure in 3-wire serial communication of Main microcomputer	Go to No. 7 Subcategory Information
8	Failure in IIC communication of Main microcomputer	Go to No. 8 Subcategory Information
9	Failure in Communication of Main microcomputer	Immediately Shutdown
10(A)	Abnormality in FAN	Go to No. 10 Subcategory Information
11(B)	Abnormality in high temperature	Immediately Shutdown
12(C)	Failure in Digital Tuner	Go to No. 12 Subcategory Information
13(D)	Failure in Power Supply at MTB section	Go to No. 13 Subcategory Information
15(F)	Failure in Main EEPROM	Immediately Shutdown

B

*: Indicates the frequency of Blue LED flashing when the shutdown is occurred.

C

< No. 5 Subcategory Information on "Shutdown signal from D-Amp./short-circuit of speaker terminal" >

Value	Shutdown Factor	Remarks (Operation)
3	MSPMAP	Immediately Shutdown

< No. 7 Subcategory Information on "Failure in 3-wire serial communication of Main microcomputer" >

Value	Shutdown Factor	Remarks (Operation)
1	Communication error of IF microcomputer	Immediately Shutdown
2	Communication error of ARIA	Immediately Shutdown

D

< No. 8 Subcategory Information on "Failure in IIC communication of Main microcomputer" >

Value	Shutdown Factor	Remarks (Operation)
1	Tuner 1	Immediately Shutdown
2	MSP/MAP	Immediately Shutdown
3	AV-Switch	Immediately Shutdown
4	RGB-Switch	Immediately Shutdown
5	Main VDEC	Immediately Shutdown
6	VDEC-SDRAM	Immediately Shutdown
7	AD/PLL	Immediately Shutdown
8	HDMI	Immediately Shutdown
9	DisplayPortTx	Immediately Shutdown
B	US-MAP	Immediately Shutdown
C	GCR	Immediately Shutdown
D	COFDM	Immediately Shutdown

E

< No. 10 Subcategory Information on "Abnormally in FAN" >

Value	Shutdown Factor	Remarks (Operation)
1	FAN 1	Immediately Shutdown
2	FAN 2	Immediately Shutdown

< No. 12 Subcategory Information on "Failure in Digital Tuner" >

Value	Shutdown Factor	Remarks (Operation)
1	Starting error of the digital tuner	Communication stop
2	Communication error with the digital tuner	
3	DTB device error	
4	Abnormally in BCM7038	
5	Fugue	
6	Audio Chip	
7	Tuner 1/Tuner 1 or 2	
8	Card I/F IC	
9	VBI Slicer	
B	Flash	
C	EEPROM	
D	EEPROM	
F	DTV Antenna	
G	Home Gallery	
I	Application	
J	DEMODO(US)/COFDM(EU)	
K	Tuner 2	
L	S2DEMODO	
M	LNB	
O	DTB ERROR	
P	Abnormally in DTB (S2) antenna	

< No. 13 Subcategory Information on "Failure in Power supply at MTB section" >

Value	Shutdown Factor	Remarks (Operation)
1	RST 2	Immediately Shutdown
2	RST 4	Immediately Shutdown

F

[5] FAY/FAN (ADJUSTMENT COMMANDS PERMISSION/PROHIBITION)

The commands FAY/FAN are for prohibiting/permitting panel/MTB-adjustment commands.

Command Format	Operation		Remarks
	Effective Operation Modes	Control	
[FAY]	Normal operation mode while the power is on	Adjustment command is valid.	For details, refer to the section "6.1 [3] FUNCTIONS WHEN ENTERING THE SERVICE FACTORY MODE".
[FAN]	During FAY	Adjustment command is invalid.	

1234

6. SERVICE FACTORY MODE

6.1 DETAILS OF THE SERVICE FACTORY MENU

A

Operations during Service Factory mode are described here.

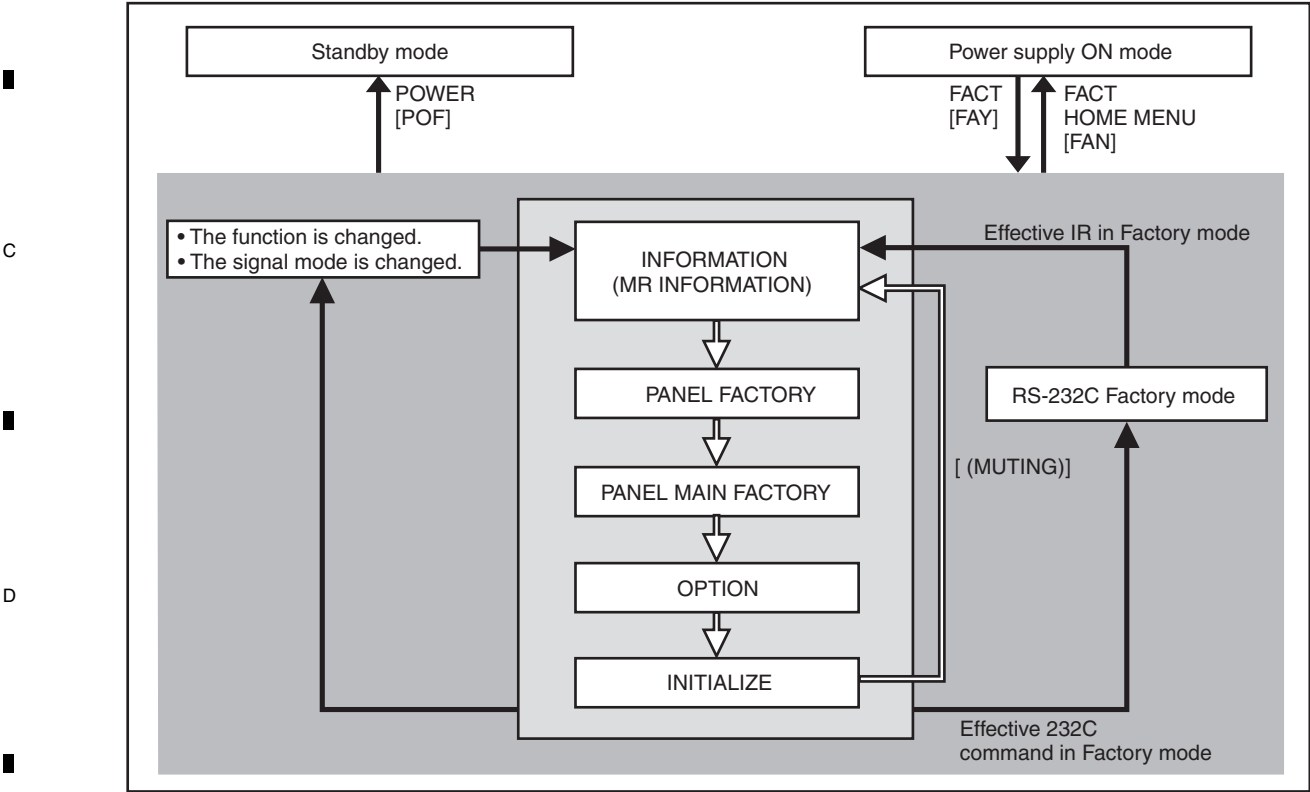
Before entering Factory mode of the PDP, make sure that the "HD AV Converter" setting on the PDP menu is set to "Disable." If it is set to "Enable," change it to "Disable" then enter Factory mode.

To confirm the "HD AV Converter" setting on the PDP menu, proceed as follows:
Select HOME MENU, Option, then HD AV Converter in HDMI Control Setting.

Note: If "HD AV Converter" is set to "Enable," the video/audio signals will not be displayed/output even if external equipment is connected via input connectors other than INPUT 4 of the PDP.

B

[1] SERVICE FACTORY MODE TRANSITION CHART



E

[2] HOW TO ENTER/EXIT SERVICE FACTORY MODE

- **How to enter Service Factory Mode**
By using a PDP service remote control)
• PDP service remote control : Press [FACTORY] key.
By issuing RS-232C commands)
• During normal Standby mode : Issue [PON] then [FAY].
• During normal operation mode : Issue [FAY].
- **How to enter Service Factory Mode by Using the supplied Remote Control Unit**
• From this model, can not enter the Service Factory Mode by operating the supplied remote control unit keys.
- **How to exit Service Factory Mode**
By using a PDP service remote control)
• PDP service remote control : press [FACTORY] key.
• Supplied remote control unit : press [HOME MENU] key.
By issuing RS-232C commands)
• Issue [FAN].
- F

[3] FUNCTIONS WHEN ENTERING THE SERVICE FACTORY MODE

■ Functions whose setting are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received) :

Function	Remarks
2-Screen Operation	Input function set on the main side is selected.
FREEZE	
Auto size, Side Mask	It is not performed during Factory mode.
ORBITER, Mask control	Central value operation (ORBITER)
Sleep Timer	Cancel the operation.
Room light sensor	Turn off the detecting operation (Setting data will be retained.)
Blue LED dimmer	Turn off the operation (Setting data will be retained.)
Setting of Parental Control	When this is turned off, the block of the screen is released.
Power Control	Turn off the operation (However, the setting maintains it.)
Image Position	Central value operation

Note: Enter the factory after cancelling ACI because the ACI operation setting OFF and not done.

■ User data

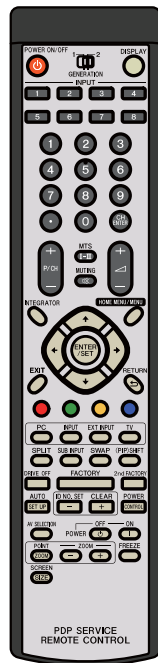
User data will be treated as follows :

- User data on picture-quality and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Service Factory mode, the current audio-quality adjustment data will be still be retained in memory.
- User-setting data will be applied to the various settings (items on the menus), signal formats, and the items that are associated with path change (HDMI settings, etc.).
- Data on screen (i.e., screen position; meaning clock dividers, and not including data on screen size). Are reset to the default values (data stored in memory will be retained).
Screen size will be retained.

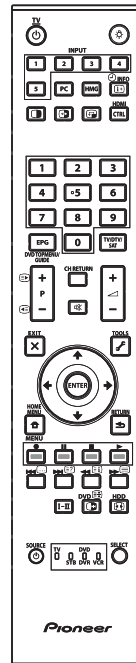
[4] REMOTE CONTROL CODE IN SERVICE FACTORY MODE

Remote Control Keys	Basic Functions	Remarks
MUTING	Switching the main items.	Shifting to the next main item (top).
↓ (DOWN)	Switching the subtitled items.	Shifting downward to the next subtitled item.
↑ (UP)	Switching the subtitled items.	Shifting upward to the next upper layer.
← (LEFT)	Decreasing the adjustment value.	Decreasing the adjustment value.
→ (RIGHT)	Increasing the adjustment value.	Increasing the adjustment value.
ENTER/SET	Switching the layers.	Shifting downward or upward to the next lower or upper layer.
INPUT	Selecting INPUT.	Shifting the INPUT to the next function.
INPUTxx	Selecting INPUT.	Switching the INPUT to xx. (xx=1 to 5)
CH+/P+	Increasing the channel number.	
CH-/P-	Decreasing the channel number.	
Numeric Keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF.	Turning the power off.
FACTORY	Factory OFF (Factory mode)	In Factory mode, turning Factory mode off.
	Factory ON (Non-Factory mode).	In Non-Factory mode, turn Factory mode on.
HOME MENU	Menu ON.	In Factory mode, turn Factory mode off.
VOLUME+	Volume UP.	Increasing 10 the adjustment value. (PANEL FACTORY)
VOLUME-	Volume DOWN.	Decreasing 10 the adjustment value. (PANEL FACTORY)
DRIVE OFF (Note1)	Drive Mode OFF.	Turning Drive mode off.
INTEGRATOR	INTEGRATOR MENU ON.	Enter INTEGRATOR MODE.

(Note 1) When ten seconds have passed since the [DRIVE OFF] key was pressed at the standby, it becomes invalid.
Please press [POWER] key from the [DRIVE OFF] key pressing within ten seconds when you do power supply ON while driven OFF.



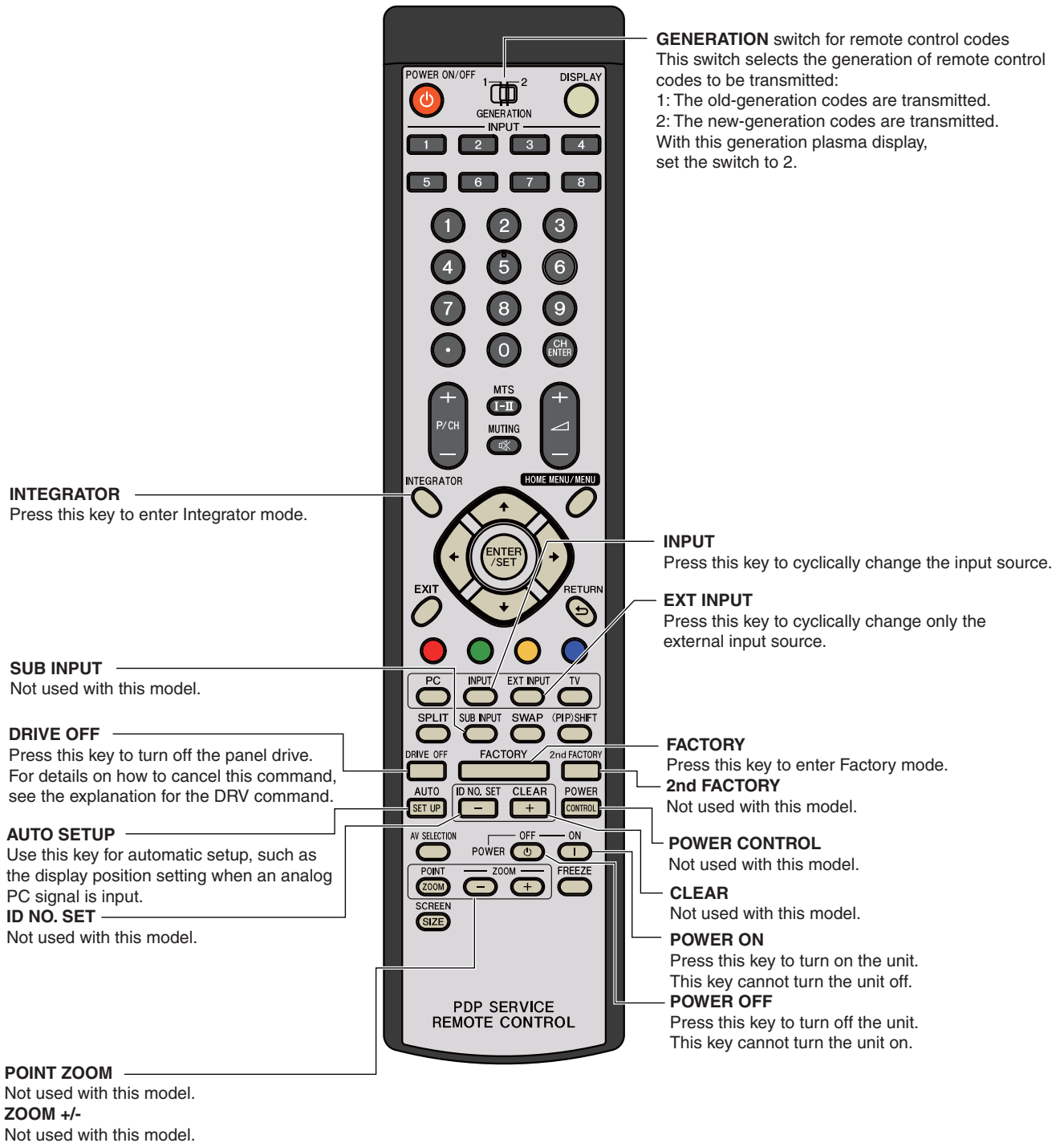
PDP service
remote control



Supplied
remote control

[5] PDP SERVICE REMOTE CONTROL

- The keys labeled with the same names on the service remote control unit have the same functions as those of the supplied remote control unit. (See "2.3 PANEL FACILITIES.")
- For the keys not provided on the supplied remote control unit, see the explanations below:



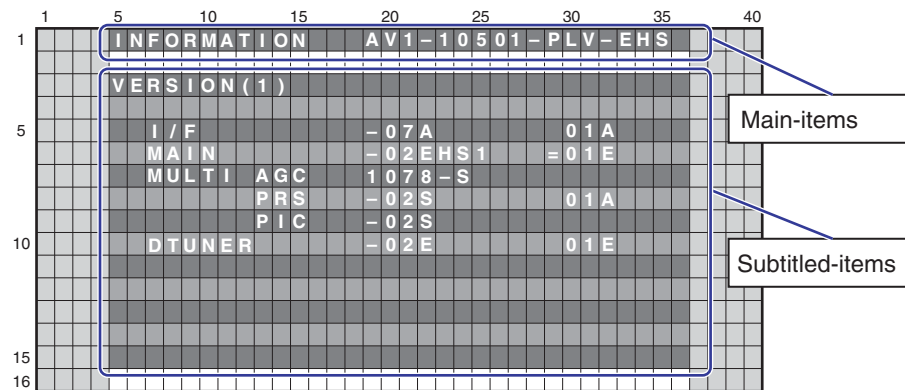
[6] FACTORY HIERARCHICAL TABLE

Large Item			Variable / Adjustment Range	Remarks
	Middle Item	Small Item		
6.2 [1] INFORMATION				
	[1-1] VERSION (1)			
	[1-2] VERSION (2)			
	[1-3] VERSION (3)			
	[1-4] MAIN NG	CLEAR <=>	NO <=> YES	
	[1-5] TEMPERATURE			
	[1-6] HOUR METER	CLEAR <=>	NO <=> YES	
	[1-7] HDMI SIGNAL INFO 1			
	[1-8] HDMI SIGNAL INFO 2			
	[1-9] VDEC SIGNAL INFO 1			
	[1-10] VDEC SIGNAL INFO 2			
6.2 [2] PANEL FACTORY (+) (*2)				
	[2-1] PANEL INFORMATION			
	[2-2] PANEL WORKS			
	[2-3] POWER DOWN			
	[2-4] SHUT DOWN			
	[2-5] PANEL-1 ADJ (+)			
	[2-6] PANEL-2 ADJ (+)			
	[2-7] PANEL FUNCTION (+)			
	[2-8] ETC (+)			
	[2-9] RASTER MASK SETUP (+)			
	[2-10] PATTERN MASK SETUP (+)			
	[2-11] COMBI MASK SETUP (+)			
6.2 [3] PANEL MAIN FACTORY (+) (*2)				
	[3-1] PM NG INFO			
	[3-2] PM STATE INFO			
	[3-3] DP_RX INFO			
	[3-4] PM_SETUP (+)			
6.2 [4] OPTION				
	[4-1] CH PRESET <=>		DISABLE <=> ENABLE	Exclusively used for production line
	[4-2] Digital AFT <=>		DISABLE <=> ENABLE	Exclusively used for production line
	[4-3] SYNC DET (+)			for the technical analysis
	[4-4] CTI (+)			for the technical analysis
6.2 [5] INITIALIZE				
	[5-1] SIDE MASK LEVEL (+)	SIDE MASK LEVEL <=>		
	[5-2] FINAL SETUP	DATA RESET <=>	NO <=> YES	
	[5-3] DTB SERVICE MODE	MODE SHIFT <=>	NO <=> YES	for the technical analysis (*1)
	[5-4] Wide XGA AUTO <=>		DISABLE <=> ENABLE	for the technical analysis
	[5-5] AUTO ADJUST. <=>	AUTO ADJUST. <=>	NO <=> YES	

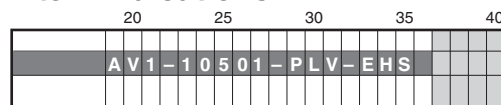
(*1): Exit the Service Factory Menu and enter the Digital Tuner Service menu.

(*2): For details on the setting items, refer to the Service manual of the PLASMA DISPLAY (KRP-600P, KRP-500P).

[7] INDICATIONS IN SERVICE FACTORY MODE



Main-item indications



① Input function

Input Functions	OSD
AV 1 to 5	AV 1 to 5
Terrestrial Wave (Analog)	AIR
Terrestrial Wave (Digital)	ARD
Satellite digital broadcasting	SAT
Cable (Digital)	CBD
Home Media Gallery	HMG
PC	PC

② SIG mode and Screen size

Note: See SIG-Mode Tables. (See next page.)

③ Color system and Signal type

Color System and Signal Type	OSD	
	At Composite Input	At S-connector Input
NTSC	NTV	NTS
PAL	PLV	PLS
PAL M	PMV	PMS
PAL N	PNV	PNS
PAL 60	P6V	P6S
SECAM	SCV	SCS
4.43 NTSC	4NV	4NS
BLACK/WHITE	BWV	BWS
Y/CB/CR	CBR	
Y/PB/PR	PBR	
RGB	RGB	
Digital Video signal	DIG	

④ Option (Destination, Panel Generation, etc.)

Options	OSD
KRP-500P/WYSIXK5	EHS
KRP-600P/WYSIXK5	

A

② SIG Mode and Screen size (by User is displayed)

1st and 2nd characters : Resolution of the input signal

3rd and 4th characters : Refresh rate of the input signal

5th character : Selection of the screen size

B

■ Input signal mode table for video signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.750
	60	SDTV*525i	60.000	15.750
20	50	SDTV*625p	50.000	31.500
	60	SDTV*525p	60.000	31.500
30	50	HDTV*1125i	50.000	33.750
	60	HDTV*1125i	60.000	33.750
40	50	HDTV*750p	50.000	45.000
	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000
	50	HDTV*1125p	50.000	56.250
	60	HDTV*1125p	60.000	67.500

Fv: Vertical Frequency, Fh: Horizontal Frequency

C

■ Input signal mode table for PC signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
C1	70	720 x 400	70.087	31.469
C2	60	640 x 480	59.940	31.469
C4	60	800 x 600	60.317	37.879
C6	60	1280 x 720	60.000	44.800
C7	60	1024 x 768	60.004	48.363
C9	60	1360 x 768	60.015	47.712
D6	60	1280 x 1024	60.000	64.000

Fv: Vertical Frequency, Fh: Horizontal Frequency

D

■ Current selection of the screen size

5th Character	GUI Notation	VIDEO	PC	Remarks
0	DOT BY DOT	●	—	
1	4:3	●	●	
2	FULL	●	●	
3	ZOOM	●	—	
4	CINEMA	●	—	
5	WIDE	●	—	
6	FULL 14:9	●	—	
7	CINEMA 14:9	●	—	
9	WIDE1	●	—	
A	WIDE2	●	—	

●: supported, —: unsupported

F

6.2 DETAILS OF THE FACTORY MENU

[1] INFORMATION

■ Operation items

No.	Function	Content	RS-232C Command
[1-1]	VERSION (1)	The Flash memory versions for each device are displayed.	QS1
[1-2]	VERSION (2)	The Flash memory versions for each device are displayed.	QSE
[1-3]	VERSION (3)	The Flash memory versions for each device are displayed.	QSB
[1-4]	MAIN NG	The Shutdown NG information and Event Times in the MTB section are displayed.	QNG
[1-5]	TEMPERATURE	The present temperature and the FAN rotating status are displayed.	—
[1-6]	HOURLY METER	The accumulation power ON count of the panel is displayed.	—
[1-7]	HDMI SIGNAL INFO 1	The status registers of HDMI receiver are displayed with hexadecimal.	—
[1-8]	HDMI SIGNAL INFO 2		
[1-9]	VDEC SIGNAL INFO 1	Display the signal information input to VDEC.	—
[1-10]	VDEC SIGNAL INFO 2		

[1-1] VERSION (1)

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

Display Item	Meaning	Display Example (Program)	Display Example (Boot)
I/F	I/F microcomputer	-07A	01A
MAIN	Main microcomputer	-02EHS1	=01E
MULTI AGC	AGC data of Multi processor	1078-S	
MULTI PRS	Program of Multi processor	-02S	01A
MULTI PIC	Picture quality data of Multi processor	-02S	
DTUNER	Software program of the Digital tuner	-02E	01E

[1-2] VERSION (2)

	1			5				10					15					20					25					30				35				40	
1																																					
5																																					
10																																					
15																																					
16																																					

Display Item	Meaning	Display Example
DTB HARD	DTB Hardware Version	0342
PASSWORD	User setting password	1234
DP TX	DP TX Firmware Version	123456789ABCDEFG
DP TX HARD	DP TX Hardware Version	2C13

[1-3] VERSION (3)

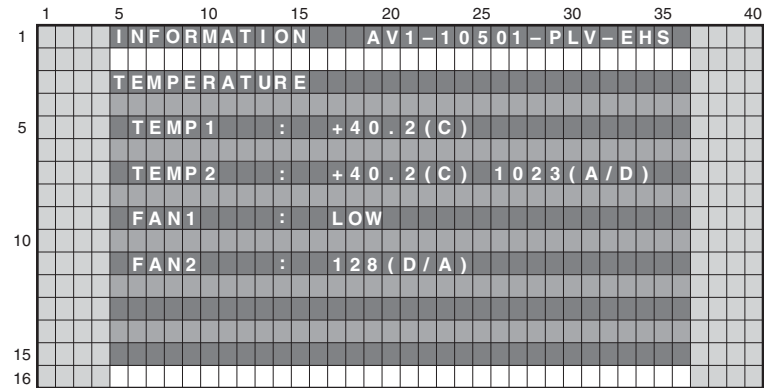
1	5	10	15	20	25	30	35	40
1								

Display Item	Meaning	Display Example (Program)	Display Example (Boot)
P_MAIN	Panel Main microcomputer	-02AS	01A
MODULE	Module microcomputer	-06A	01A
SEQ PRS	Program of the sequence processor	-03Y	01A
Display Item	Meaning	Display Example	
DP RX	DP RX Firmware Version	123456789ABCDEFG	
DP RX HARD	DP RX Hardware Version	2C12	
Display Item	Meaning		
PANEL INFO	It displays the generation of the panel, inchage and the type of the panel.		

[1-5] TEMPERATURE

A present temperature and the FAN rotation are displayed.

If either [←] key or [→] key is pressed, the display data is refreshed.



Display Item	Meaning
TEMP1	The temperature of the sensor on the panel side is displayed by the Centigrade (C).
TEMP2	The temperature conversion display is done with 10 bit the A/D input value of IF microcomputer. It is displayed by both the Centigrade (C) and 8 bit A/D value. Note: When temperature (C) of the sensor becomes more than a specified temperature, the shutdown start of processing.
FAN1	Although STOP, LOW, or HIGH may be displayed, they are meaningless. Ignore those displays.
FAN2	The value of the rotation state of FAN is displayed. During a rotation of FAN, 8bit D/A value output from IF microcomputer is displayed. It is displayed with OFF during a stop.

[1-6] HOUR METER

	1			5				10					15					20					25					30					35					40		
1																																								
5																																								
10																																								
15																																								
16																																								

Display Item	Meaning	Display Example
PANEL	HOUR METER of the panel	00151H 21M
P-COUNT	Accumulation power ON count of the panel	00000095 TIMES
SERIAL	Serial number of the Display (panel)	ABCDEFGHIJKLMNO

• MTB HOUR METER

In HOUR METER screen on Factory Menu, press the [ENTER/SET] key, and then it moves to the screen to clear MTB HOUR METER. (MTB HOUR METER is cleared only.)

	1		5		10		15		20		25		30		35		40	
1			INFORMATION							AV1-10501-PLV-EHS								
			MTB HOUR METER															
5																		
10																		
15			CLEAR <=>															
16			: NO															

Operation:

- Even if [←] key or [→] key is pressed, {CLEAR <=> :YES} ↔ {CLEAR <=> :NO} is repeated.
- Selecting <NO> then pressing the ENTER/SET key will return the screen to the next higher layer, without doing anything.
- Selecting <YES> then holding the ENTER/SET key pressed for 5 seconds will clear the HOUR METER (HOUR METER while the MAIN NG screen is displayed) data that are managed in MTB then return the screen to the next higher layer.

[1-7] HDMI SIGNAL INFO 1

	1	5	10	15	20	25	30	35	40
1									
5									
10									
15									
16									

Displays the input signal information of HDMI terminal

Display Item	Meaning
PWR5V	+5 V power detection (18 pin of HDMI terminal)
VSYNC	VSYNC detection
CKDT	Clock detection
SCDT	SYNC detection
DCRPT	HDCP decryption status
AUTH	HDCP authentication status
MODE	HDMI mode status
BIST	HDCP Key status (Always display it with "--".)
NVAL	N value
CTSVAL	CTS value
AKSV	Shadow AKSV value
BKSV	Shadow BKSV value
IT CNT	IT content (AVI info)
EXTCOL	Extension colorimetry (AVI info)
RGB QR	RGB range (AVI info)
PIXDEP	Number of pixel/bit

[1-8] HDMI SIGNAL INFO 2

	1	5	10	15	20	25	30	35	40																															
1			INFORMATION										AV1-30601-DIG-EHS																											
			HDMI SIGNAL INFO 2																																					
5			H RES : 2200										COL SP : 422																											
			V RES : 0563										COLMET : 709																											
			H DE : 1920										ASPECT : 16 : 9																											
			V DE : 0540										ACTIVE :																											
			INTRL : INT										Same as pict																											
10			V POL : POS										V FMT :																											
			H POL : POS										1920x1080i@60																											
			AUDIO : 48k										PIX RP : 00																											
			PCM										SOURCE : PIONEER																											
			20 bit										DVR-DT90																											
15																																								
16																																								

Displays input signal status of HDMI terminal

Display Item	Meaning
H RES	Number of horizontal pixels
V RES	Number of vertical lines
H DE	Number of effectively horizontal pixels
V DE	Number of effectively vertical lines
INTRL	Interlace (=INT) or progressive (=PRG)
V POL	VSYSN polarity
H POL	HSYSN polarity
AUDIO (first line)	Sampling frequency. (ex. DVD: 48kHz, CD: 44.1kHz) *1
AUDIO (second line)	Audio format PCM (PCM) or No PCM (no PCM)
AUDIO (third line)	Quantization bit
COL SP	Color space (AVI Info) 422 or 444 or RGB *2
COLMET	Colorimetry (AVI Info)
ASPECT	Aspect (AVI Info)
ACTIVE	Active format (AVI Info)
V FMT	Video format (AVI Info)
PIX RP	Pixel count
SOURCE (first line)	Vendor name of the emission device
SOURCE (second line)	Model name of the emission device

*1: Confirm if this item is displayed when the audio is not outputted.

*2: If may not match to the state of emission devices when the color is abnormal.

Display of HDMI FACTORY and correspondence of resolution

Please confirm the following items when the picture doesn't come out.

Input Signal	FACTORY Display				
	H RES	V RES	H DE	V DE	V FMT
480i (525i)@60	858	262 or 263	720	240	720x480i@60
480p (525p)@60	858	525	720	480	720x480p@60
1080i (1125i)@60	2200	562 or 563	1920	540	1920x1080i@60
720p (750p)@60	1650	750	1280	720	1280x720p@60
1080p (1125p)@60	2200	1125	1920	1080	1920x1080p@60
1080p (1125p)@24	2750	1125	1920	1080	1920x1080p@24
576i (625i)@50	864	312 or 313	720	288	720x576i@50
576p (625p)@50	864	625	720	576	720x576p@50
1080i (1125i)@50	2640	562 or 563	1920	540	1920x1080i@50
720p (750p)@50	1980	750	1280	720	1280x720p@50
1080p (1125p)@50	2640	1125	1920	1080	1920x1080p@50

A

B

C

D



E

F

A [2] PANEL FACTORY (+)

■ Operation Items

No.	Function	Content	RS-232C
[2-1]	PANEL INFORMATION	——	——
[2-2]	PANEL WORKS	——	——
[2-3]	POWER DOWN	——	——
[2-4]	SHUT DOWN	——	——
[2-5]	PANEL-1 ADJ (+)	——	——
[2-6]	PANEL-2 ADJ (+)	——	——
[2-7]	PANEL FUNCTION (+)	——	——
[2-8]	ETC. (+)	——	——
[2-9]	RASTER MASK SETUP (+)	——	——
[2-10]	PATTERN MASK SETUP (+)	——	——
[2-11]	COMBI MASK SETUP (+)	——	——

Note: For details on the setting items, refer to the Service manual of the PLASMA DISPLAY (KRP-600P, KRP-500P).

C [3] PANEL MAIN FACTORY (+)

■ Operation Items

No.	Function	Content	RS-232C
[3-1]	PM NG INFO	——	——
[3-2]	PM STATE INFO	——	——
[3-3]	DP_RX INFO	——	——
[3-4]	PM_SETUP (+)	——	——

Note: For details on the setting items, refer to the Service manual of the PLASMA DISPLAY (KRP-600P, KRP-500P).

D [4] OPTION

Operation item

No.	Function	Content	RS-232C
[4-1]	CH PRESET <=>	Set the channel map for production line	SCP
[4-2]	Digital AFT <=>	Set AFT of the Satellite digital broadcasting	AFT
[4-3]	SYNC DET (+)	Set the synchronized signal detection of VDEC	——
[4-4]	CTI (+)	Set the synchronized signal detection of VDEC	——

E [4-1] CH PRESET <=>

Exclusively used for production line.

[4-2] Digital AFT <=>

Exclusively used for production line.

[4-3] SYNC DET (+)

Exclusively used for technical analysis (details omitted).

F [4-4] CTI (+)

Exclusively used for technical analysis (details omitted).

[5] INITIALIZE

Operation item

No.	Function	Content	RS-232C
[5-1]	SIDE MASK LEVEL (+)	Configure the color of the side mask.	SML
[5-2]	FINAL SETUP	Initialize flash memories on virgin product status	FST
[5-3]	DTB SERVICE MODE	Enter the Digital Tuner Service Menu	----
[5-4]	Wide XGA AUTO <=>	Exclusively used for technical analysis.	----
[5-5]	AUTO ADJUST. <=>	Perform the auto-adjustment setting process	----

[5-1] SIDE MASK LEVEL (+)

1	5	10	15	20	25	30	35	40
1	INITIALIZE	AV1-10501-PLV-EHS						
5								
10								
15	SIDE MASK LEVEL (+)							
16								

To configure sidemask level (To adjust the values, input signal is required).

Display Item	Content	RS-232C
SIDE MASK LEVEL <=>	Adjust Side Mask level (Adjustable range: 000 to 255, Initial value: 115)	SML

Note: In this mode (SIDE MASK LEVEL), adjustment value cannot be changed with the VOLUME +/- keys.

[5-2] FINAL SETUP

1	5	10	15	20	25	30	35	40
1	INITIALIZE	AV1-10501-PLV-EHS						
5	FINAL SETUP							
10								
15	DATA RESET <=>	: NO						
16								

- To reset each memory value to factory default values. Factory command is "FST".
- When the configuration is set to <NO> and the [ENTER/SET] key is pressed, no action is taken and the menu returns to the previous screen.
- When the configuration is set to <YES> and the [ENTER/SET] key is pressed for 5 seconds, the reset action executes.

Be sure to disconnect and connect the AC cable after FINAL SETUP.
When replacing the MAIN BLOCK Assy, the FINAL SETUP is required.

A

[5-3] DTB SERVICE MODE

	1	5	10	15	20	25	30	35	40
1			INITIALIZE			AV1-10501-DIG-EHS			
			DTB SERVICE MODE						
5									
10									
15			MODE SHIFT <=>				:YES		
16									

If the [ENTER/SET] key is kept on pressing for 5 second when the status of this menu is <YES>, shift to the DTB SERVICE mode screen. (Release from the SERVICE FACTORY mode.)

[5-4] WIDE XGA AUTO <=>

Exclusively used for technical analysis (details omitted).

C

[5-5] AUTO ADJUST. <=>

	1	5	10	15	20	25	30	35	40	
1		INITIALIZE				AV1-10501-PLV-EHS				
5										
10										
15		AUTO ADJUST. <=>				:YES				
16										

- When the configuration is set to <NO> and the [ENTER/SET] key is pressed, no action is taken and the menu returns to previous screen.
- When the configuration is set to <YES> and the [ENTER/SET] key is pressed for 5 seconds, the auto-adjustment action executes.

E

- Be sure to power off with the remote control unit or disconnect and connect the AC cable after the auto-adjustment is completed.
- When some ICs on the MAIN BLOCK Assy are replaced individually, auto-adjustment is required. For details on IC numbers, see the list “■ Parts whose replacement is difficult” in “8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED.”
- When this unit is used with the HD AV Converter, the interlocking setting with the HD AV Converter is released. Reset it after the auto adjustment is completed.

F

6.3 DIGITAL TUNER SERVICE MENU

The Digital Tuner Service Menu is provided for collecting data for technological examination when the Digital Tuner has any problem in the market. This menu is introduced here just for reference.

[1] REMOTE CONTROL CODE IN DIGITAL TUNER SERVICE MENU

The following remote control cord is valid in the Digital Tuner Service Menu.

Remote Control Keys	Basic Functions	Remarks
↓ (DOWN)	Selecting the menu items and shifting the pages.	Shifting downward to the next item. Moving to the next lower page.
↑ (UP)		Shifting upward to the next item. Moving to the next upper page.
← (LEFT)	Selecting the setting value.	Modifying the setting of selected items.
→ (RIGHT)		
ENTER/SET	Shifting the menu layers	Shifting to the next menu screen.
RETURN		Shifting to the previous menu screen.
Numeric Keys	Numeric input	Input the numerical value.
POWER OFF	Power OFF	Turning the power off.
STANDBY/ON		
FACTORY	Factory ON/OFF	Release the Menu, then enter the Service Factory menu.
EXIT	MENU exit	After you exit the menu, the channel that was selected on the menu will be displayed.
MUTING	Muting	
HOME MENU	HOME MENU ON/OFF	

[2] HIERARCHICAL TABLE OF DIGITAL TUNER SERVICE MENU

Item	Remarks
Large Item	
Middle Item	
6.3 [3] Digital Tuner Service Menu	
6.3 [4] HMG Service Menu	
	Exclusively used for technical analysis: HomeMediaGallery-related information indication
6.3 [5] Digital	
Bandwidth	Exclusively used for technical analysis
Frequency	Exclusively used for technical analysis
Program Number	Exclusively used for technical analysis
Audio PID	Exclusively used for technical analysis
DTV Tuning Status	Exclusively used for technical analysis: Terrestrial digital broadcasting-related information indication
6.3 [6] Satellite	
Modulation	Exclusively used for technical analysis
Frequency	Exclusively used for technical analysis
Symbol Rate	Exclusively used for technical analysis
LNB POWER	Exclusively used for technical analysis
LNB BAND	Exclusively used for technical analysis
Program Number	Exclusively used for technical analysis
Audio PID	Exclusively used for technical analysis
SAT Tuning Status	Exclusively used for technical analysis: Satellite digital broadcasting-related information indication
6.3 [7] Software Version	
	Exclusively used for technical analysis: The software revision information that consists of it in DTB software

[3] DIGITAL TUNER SERVICE MENU SCREEN

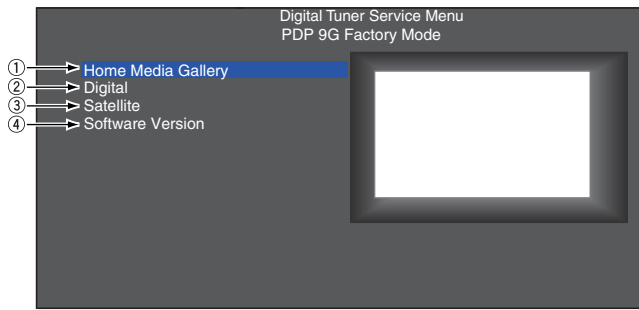


Fig.1 Digital Tuner Service Menu screen

Display a large item list of Digital Tuner Service Menu.
Select each item, and shift to each setting / information display screen.

- ① Home Media Gallery-related information indication
- ② Terrestrial digital-related setting / information indication
- ③ Satellite digital-related setting / information indication
- ④ Digital Tuner-related detailed software version indication

[4] HOME MEDIA GALLERY SCREEN

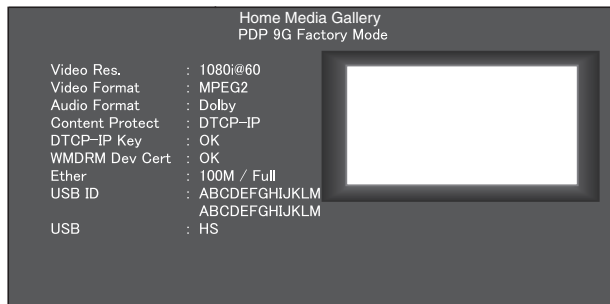


Fig.2 Home Media Gallery screen

Display the Home Media Gallery-related information.

[5] DIGITAL SCREEN

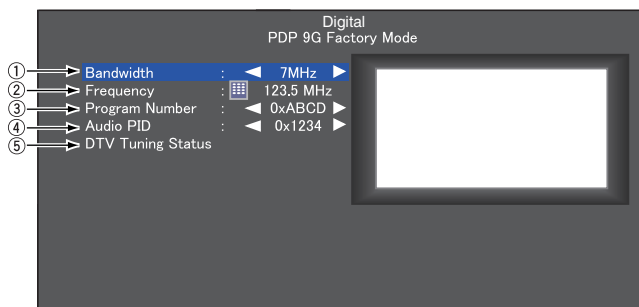


Fig.3 Digital screen

Display the Digital broadcasting-related setting / information indication.(except the satellite digital)

- ① The Bandwidth for receiving a digital broadcast can be selected. (7 MHz/8 MHz)
- ② The frequency can be set (up to 1 digit after the decimal point).
- ③ Program Number in the same stream: Service ID can be selected.
- ④ Audio PID in the same stream: Audio PID can be selected.
- ⑤ The DTV Tuning Status is displayed.

The data displayed on the DTV Tuning Status screen are as shown below:

The instructions for servicing using this screen is shown in "How to confirm the DTV Tuning Status on the Digital Tuner Service Menu" of section 5.2 [4]. Therefore, this screen is introduced here just for reference.

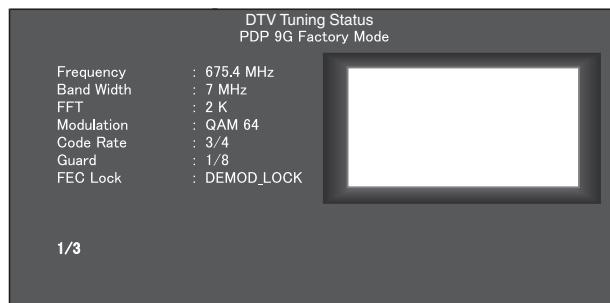


Fig.4 DTV Tuning Status (1/3) screen

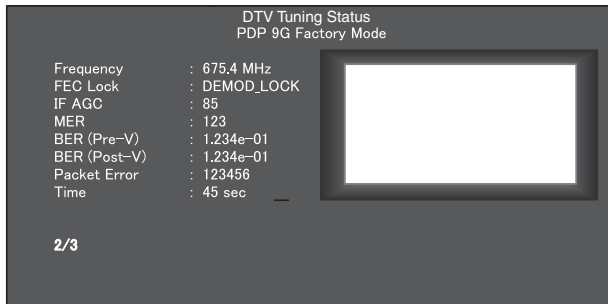


Fig.5 DTV Tuning Status screen (2/3) screen

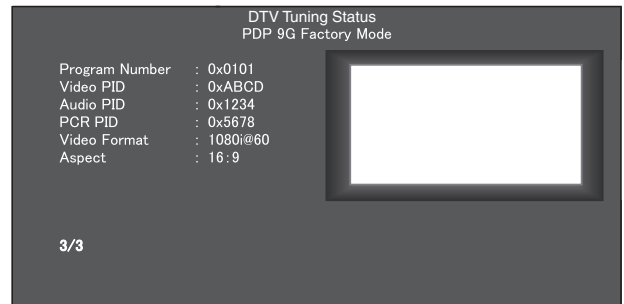


Fig.6 DTV Tuning Status screen (3/3) screen

[6] SATELLITE SCREEN

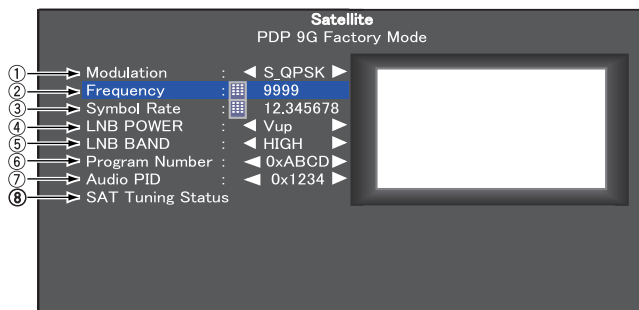


Fig.7 Satellite screen

Display the Satellite Digital broadcasting-related setting / information indication.

- ① The modulation method can be selected. (S_QPSK/S2_QPSK/S2_8PSK)
- ② The frequency can be set (0001 to 9999).
- ③ The symbol Rate can be set (1.000000 to 99.999999)
- ④ The LNB power voltage can be selected. (OFF/V/H/Vup/Hup)
- ⑤ The LNB Bandwidth can be selected. (Low/High)
- ⑥ Program Number in the same stream: Service ID can be selected.
- ⑦ Audio PID in the same stream: Audio PID can be selected.
- ⑧ The Tuning Status of Satellite Digital is displayed.

The data displayed on the SAT Tuning Status screen are as shown below:

The instructions for servicing using this screen will be provided as service information.

Therefore, this screen is introduced here just for reference.

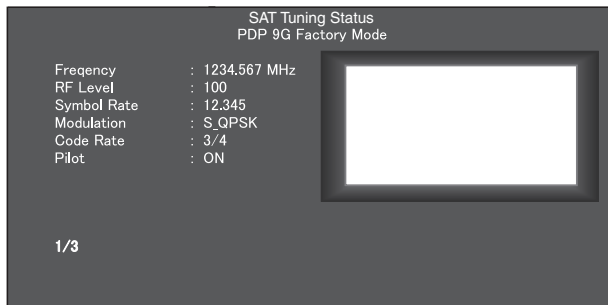


Fig.8 SAT Tuning Status (1/3) screen

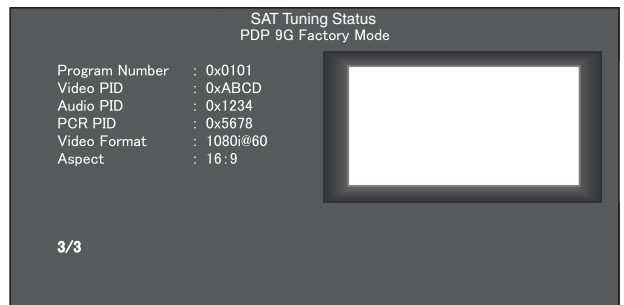


Fig.10 SAT Tuning Status (3/3) screen

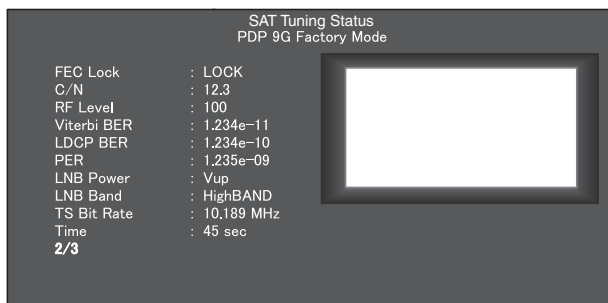


Fig.9 SAT Tuning Status (2/3) screen

[7] SOFTWARE VERSION SCREEN

The details are not described here, as this is provided for technical examination.

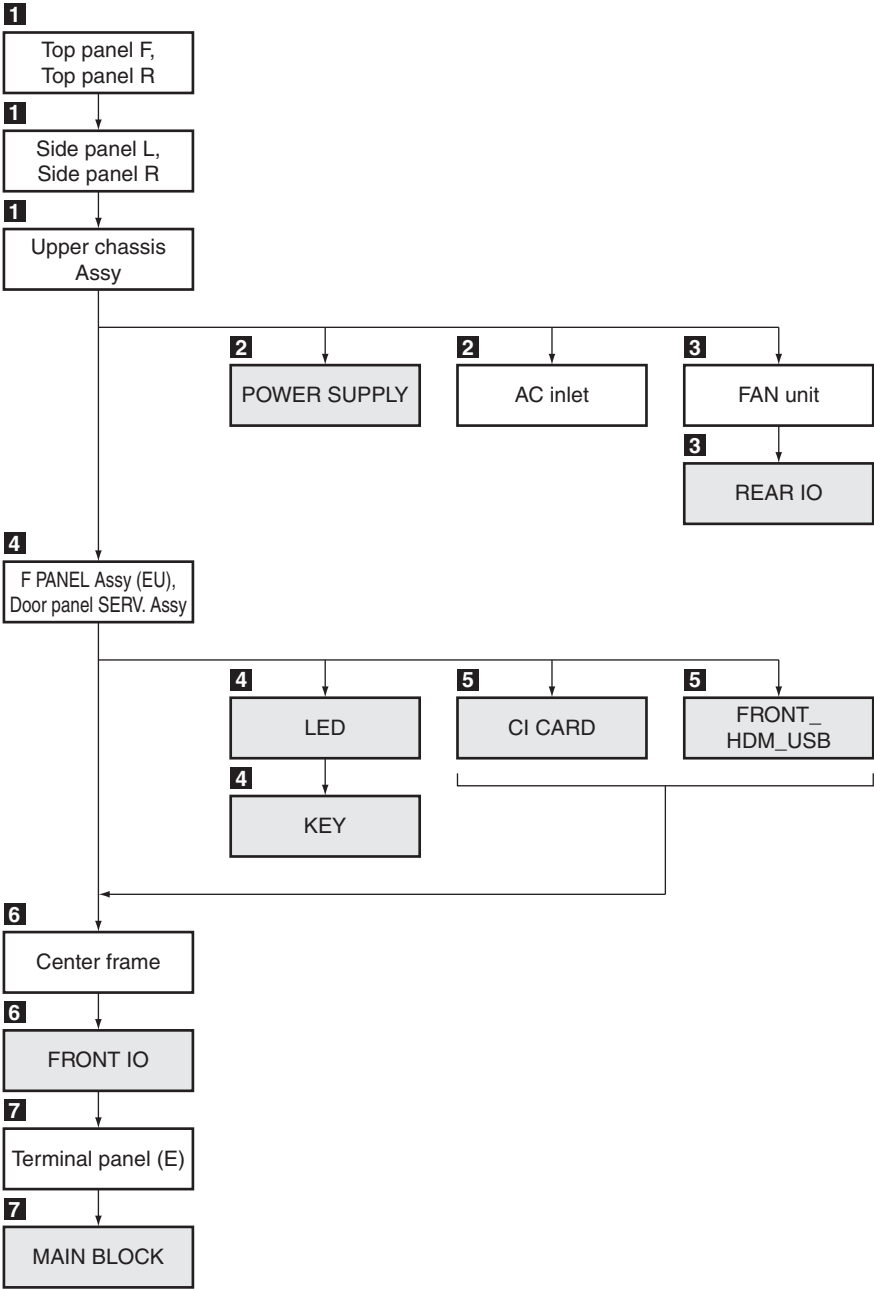
7. DISASSEMBLY

7.1 FLOWCHART OF REMOVAL ORDER

Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Flowchart of removal order for the main parts and boards

It is efficient to proceed with removal of the main parts and boards in the order shown in the chart below:



Disassembly

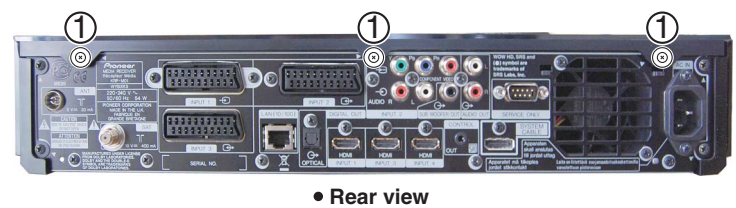
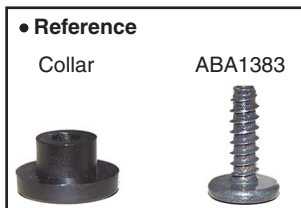
1 Exterior Section

The high-gloss resin parts of the exterior of this product are easily scratched.
During disassembly and reassembly of this product, be careful not to scratch the exterior.

Attach the protect film (GGP1121) to the inside surface of the door.
(For details on the place at which the protect film is to be attached, see “1.2 NOTES SPECIFIC TO THIS PRODUCT.”)

● Top panel F and R

- ① Remove the three collar and three screws.
(ABA1383)

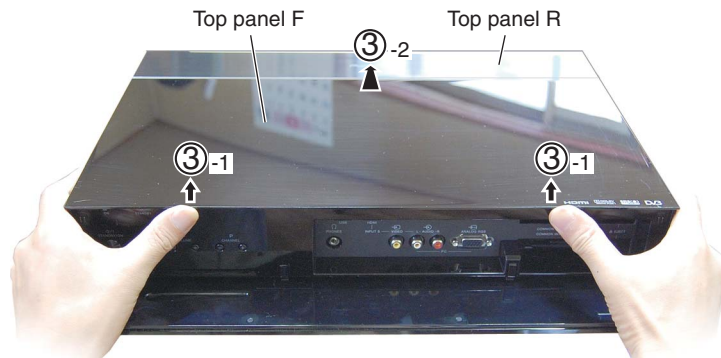


- ② Open the door panel Section.



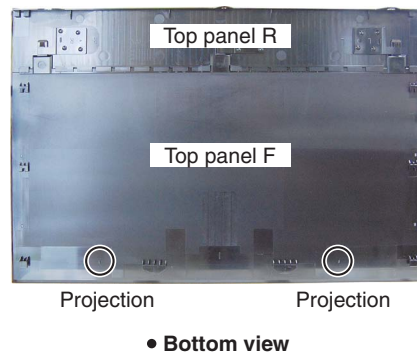
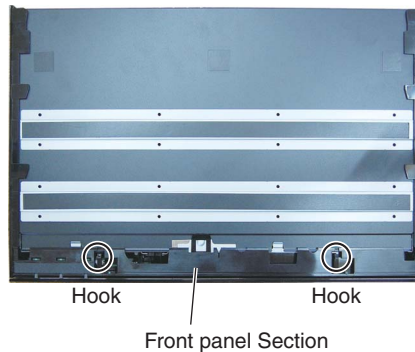
A

- ③ While pushing up at two places of the top panel using your thumbs, as shown in the photo below, to unhook the top panel, remove it by sliding it toward the rear panel.



B

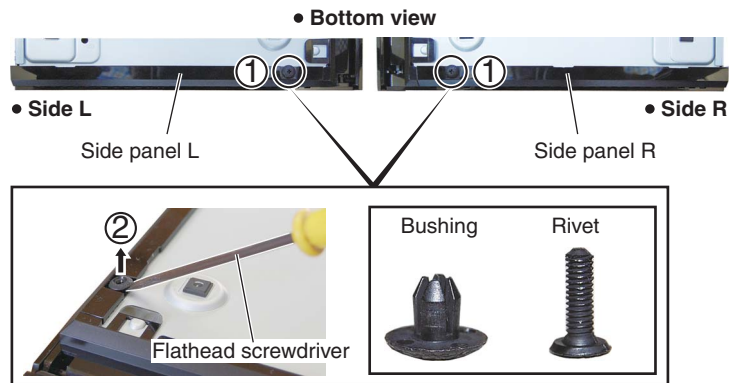
● Positions of the hooks



C

● Side panel L and R

- ① Remove the two rivets.
- ② Remove the two bushings, using a flathead screwdriver.

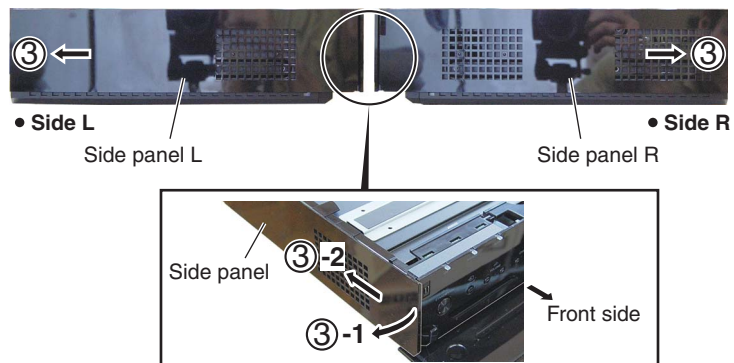


D

- ③ Remove the side panels L and R.

③-1 ③-2

Slide the side panel rearward, by stretching the front edge of the side panel outward, and remove it.



F

● Upper chassis Assy

- ① Remove the 14 screws. (BBZ30P060FTB)



● Rear view



● Side L

● Side R

● Screw tightening order

The other screws are random order.



- ② Remove the upper chassis Assy.

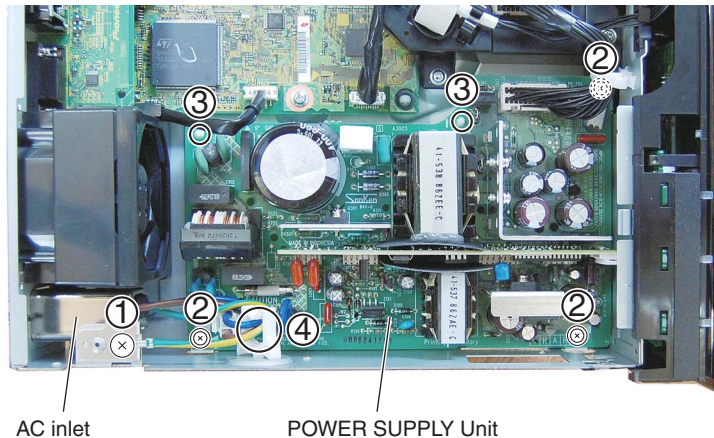


KRP-M01

A

2 POWER SUPPLY Unit

- ① Remove the one screw. (BMP40P080FSN)
- ② Remove the three screws. (BBB30P080FSN)
- ③ Remove the two circuit board spacers.
- ④ Release the jumper wire.



B

C

- ⑤ Remove the two screws. (ABZ30P080FTB)
- ⑥ Remove the AC inlet.

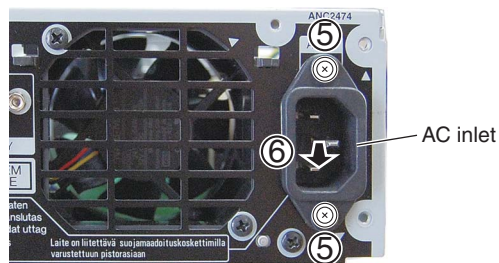
• An installation direction of the AC inlet



OK



NG

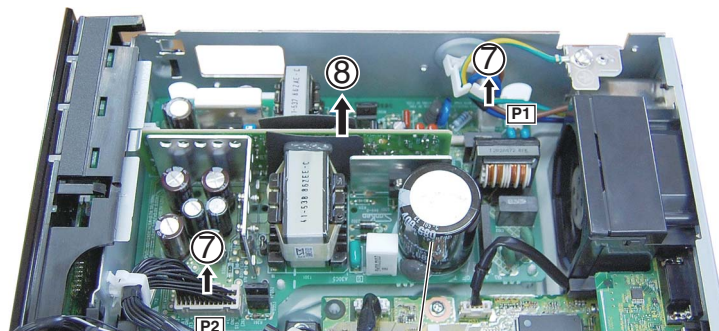


• Rear view

D

E

- ⑦ Disconnect the two connectors.
- ⑧ Remove the POWER SUPPLY Unit.

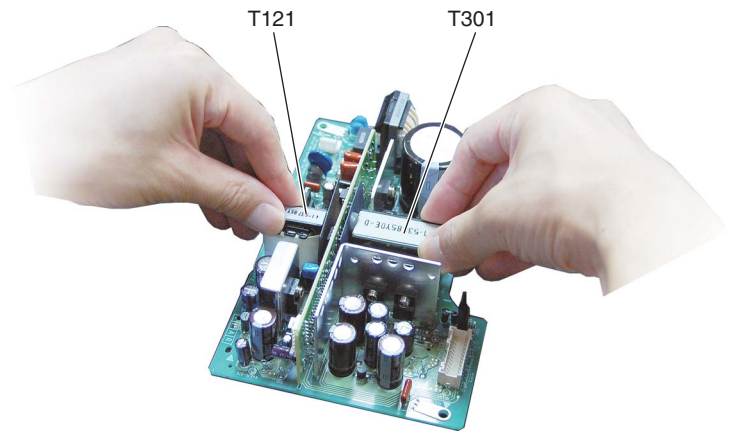


F

Notes on Removing the POWER SUPPLY Unit

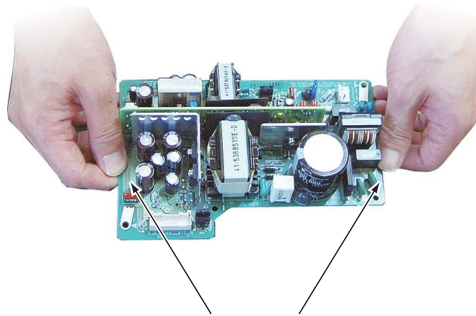
● How to lift up the POWER SUPPLY Unit

When you remove the POWER SUPPLY Unit from the chassis, first lift the board by pinching T121 and T301 transformers with your fingers. When the board is lifted up to a certain height, hold it by hand. NEVER hold the board by the radiator that is adjacent to the transformer.

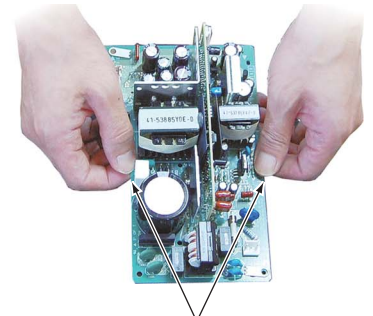


● How to hold the board after removing it from the chassis

The following two ways are recommended for holding the POWER SUPPLY Unit:

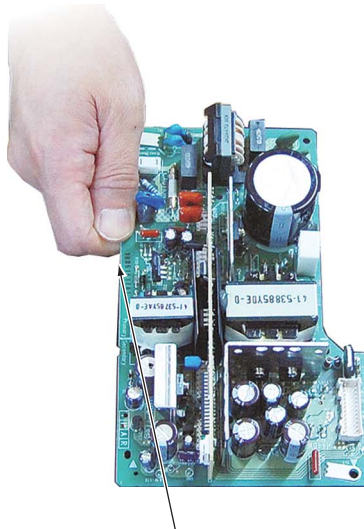


Hold at the center positions of both rims of the board.

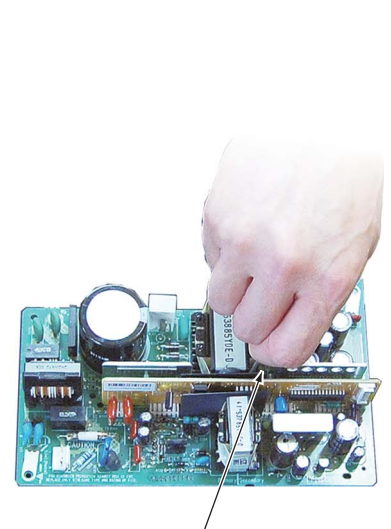


Hold at the center positions of both rims of the board.

Ways to be avoided:



NEVER hold a corner of the board with one hand.



NEVER hold the board by the radiator with one hand.

A

Note on Removing the POWER SUPPLY Unit from the Chassis and Method for Resetting Standby Power Latchup

For 3-5 minutes after the unit is turned off, residual electric charge remains in the C310 capacitor on the POWER SUPPLY Unit. Before removing the POWER SUPPLY Unit from the chassis, be sure to confirm that residual charge inside the POWER SUPPLY Unit has become sufficiently low. (Without forced discharge, residual charge that remains after 3-5 minutes will fall to one-tenth or less, which is still about 20 V. Therefore, even after the POWER SUPPLY Unit is removed, it is recommended to perform forced discharge on the POWER SUPPLY Unit, as shown below.)

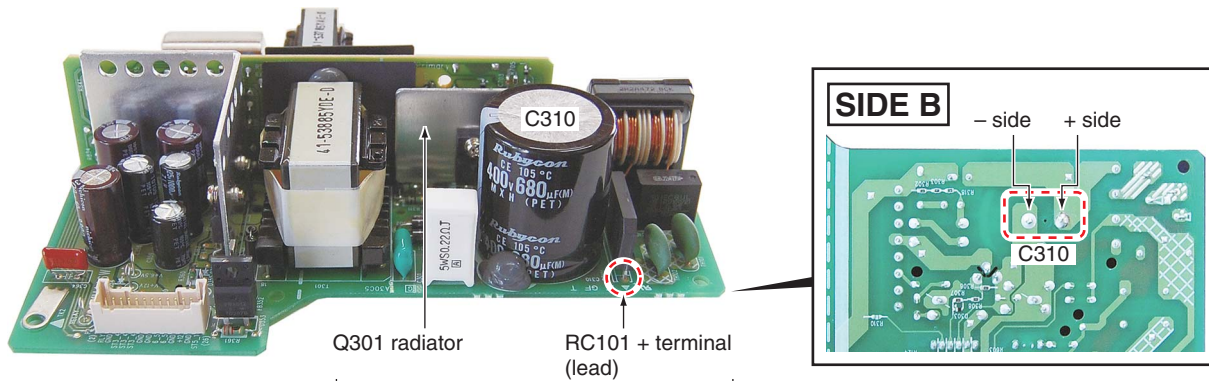
For quick removal of residual charge, forced discharge is recommended, using two 220 ohm/10 W resistors (440 ohm/20 W).

B

How to remove the POWER SUPPLY Unit

1. Make sure that the AC power cord is unplugged. Using a tester, check the voltage between the + terminal of RC101 bridge diode and Q301 radiator (equivalent to the voltage between two electrodes of C310).
2. Let the unit sit for more than 5 minutes until the voltage equivalent to that between two electrodes of C310 falls to under 20 V.
3. After checking that the voltage is under 20 V, disconnect the connectors of the POWER SUPPLY Unit and remove the POWER SUPPLY Unit.
4. Using two resistors mentioned above, completely discharge residual charge from C310.

C



After checking that the voltage at the measurement points (equivalent to the voltage between two electrodes of C310) is under 20 V, remove the POWER SUPPLY Unit. Then, completely discharge residual charge, using resistors.

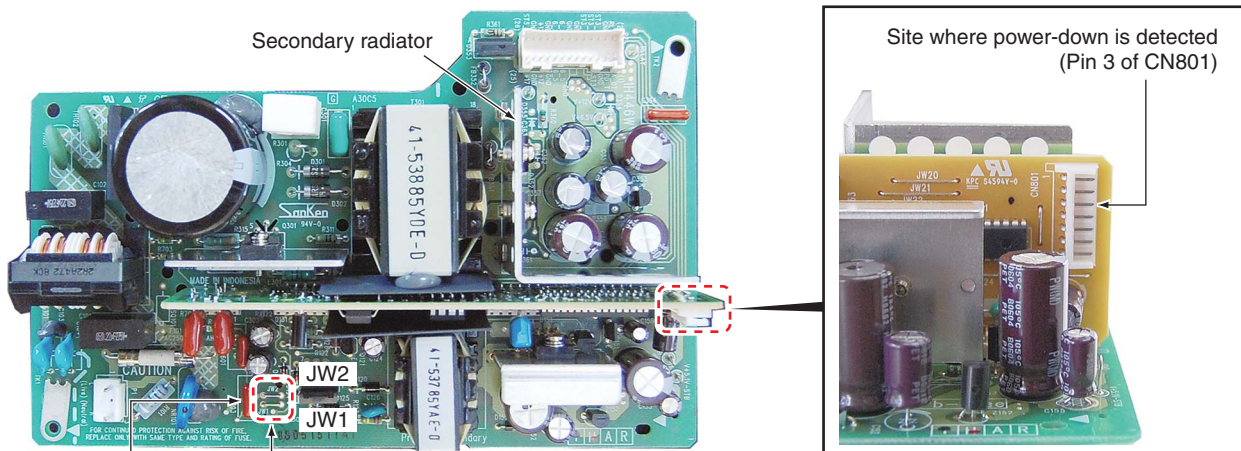
D

How to reset Standby power latchup

(In a case where the protection against Standby power excess voltage is activated)

1. After removing the causes of the malfunction, short-circuit between the JW1 and JW2 jumpers.
2. If the POWER SUPPLY Unit functions properly, after opening the above jumpers, the unit starts up.

E



F

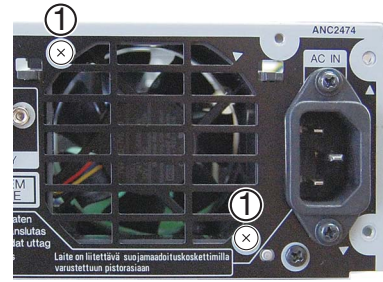
C603

To forcibly reset latchup of STBY3.4 V, short-circuit between JW1 and JW2 (near C603), using a flathead screwdriver or similar object. If the causes of the malfunction are removed, after opening the jumpers, the unit starts up.

3 REAR IO Assy

● FAN unit

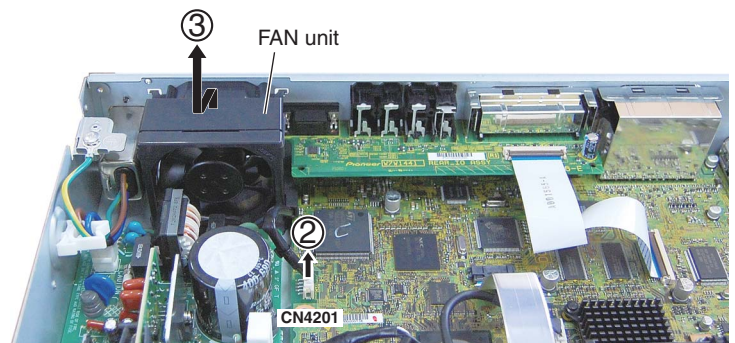
- ① Remove the two screws. (BPZ30P080FTB)



• Rear view

- ② Disconnect the one connector.

- ③ Remove the FAN unit.



● REAR IO Assy

- ① Remove the two hexagon headed screws. (ABA1382)

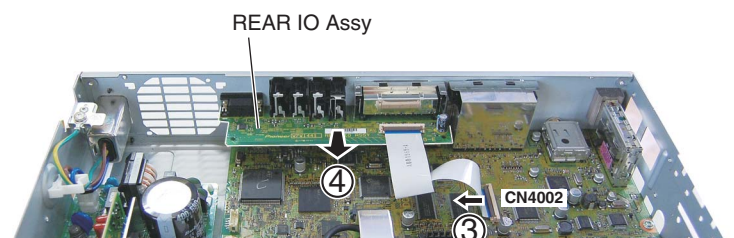
- ② Remove the four screws. (BPZ30P080FTB)



• Rear view

- ③ Disconnect the one flexible cable.

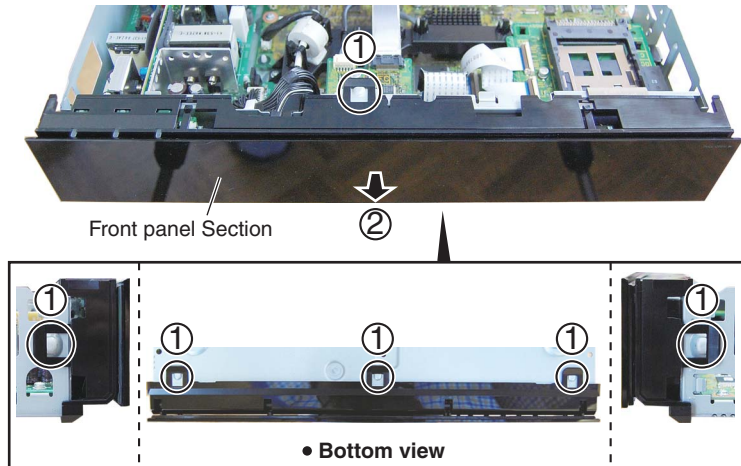
- ④ Remove the REAR IO Assy.



4 Front Panel Section

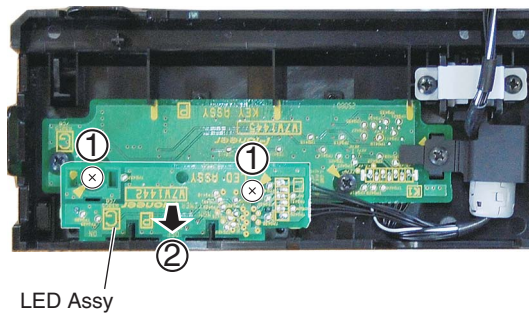
● Front panel Section

- ① Unhook the six hooks.
- ② Remove the front panel Section.



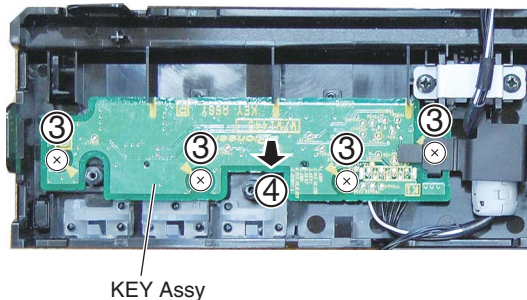
● LED and KEY Assys

- ① Remove the two screws. (BPZ30P080FTB)
- ② Remove the LED Assy.



- ③ Remove the four screws. (BPZ30P080FTB)
- ④ Remove the KEY Assy.

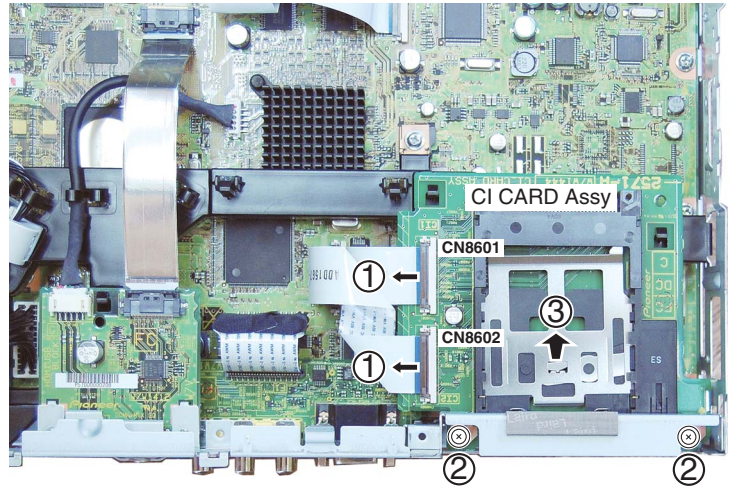
Note:
Before tightening screws, make sure that the protect film has been attached.
(For details on the place at which the protect film is to be attached, see "1.2 NOTES SPECIFIC TO THIS PRODUCT.")



5 CI CARD and FRONT_HDM_USB Assys

● CI CARD Assy

- ① Disconnect the two flexible cables.
- ② Remove the two screws. (ABZ30P060FTC)
- ③ Remove the CI CARD Assy.

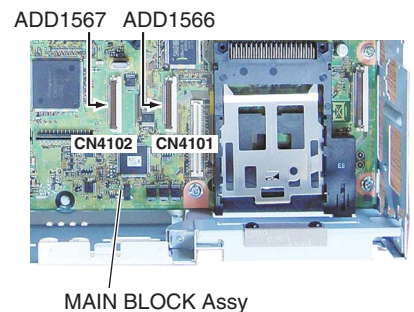
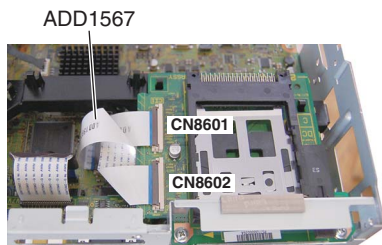
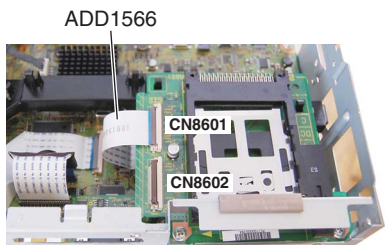


● Note on Connection of the Flexible Flat Cable for the CI CARD Assy

How to Check for Inverse Connection

After connecting the FFC cable for the CI CARD Assy, make sure that the part number printed on the upper surface of the cable is ADD1567.

ADD1567	Correctly connected
ADD1566	Inversely connected



Unit operation when the cable is inversely connected

	Activated operation	Unit operation
Unit	When activated	It starts up properly.
Slot 1: Lower slot (mounted on the MAIN BLOCK Assy)	When the circuits in the Card block are activated	They operate properly.
	When a card is inserted in Slot 1	They operate properly.
Slot 2: Upper slot (mounted on the CI CARD Assy)	When the circuits in the Card block are activated	They are not activated (no risk of being damaged, though).
	When a card is inserted in Slot 2	They are not activated (no risk of being damaged, though).

A

B

C

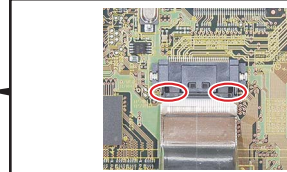
D

E

F

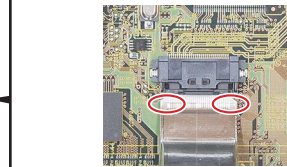
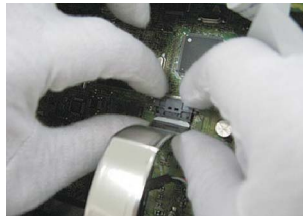
● Notes on Connecting the Shielded Flexible Flat Cable

OK



Push on the connector itself.

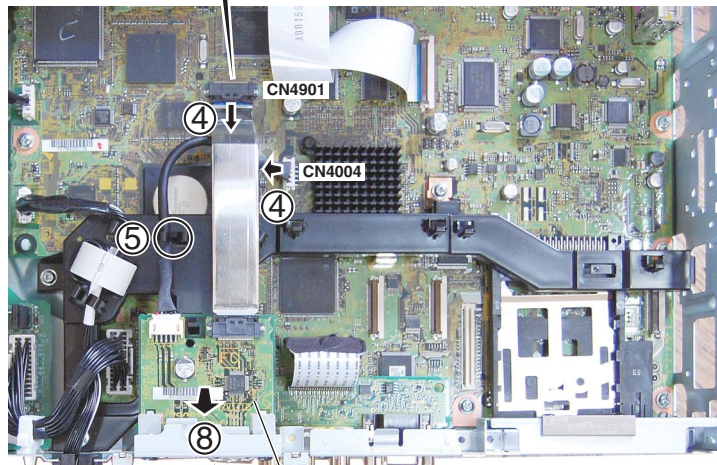
NG



Do NOT connect the connector by pushing with the cable.

● FRONT_HDM_USB Assy

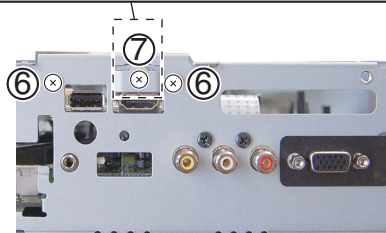
- ④ Disconnect the one flexible cable and one connectors.
- ⑤ Release the jumper wire.
- ⑥ Remove the two screws. (BBZ30P060FTB)
- ⑦ Remove the one screw. (VBA1088)
- ⑧ Remove the FRONT_HDM_USB Assy.



FRONT_HDM_USB Assy

Note:

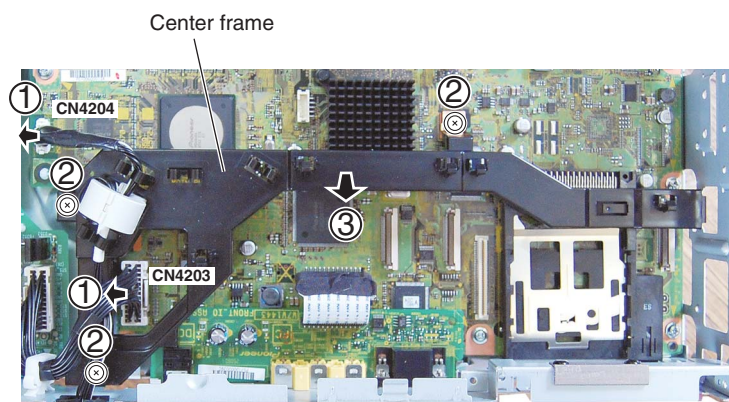
Do not use an electric screwdriver.
If the screw is over-tightened, the screw thread may be damaged.



6 FRONT IO Assy

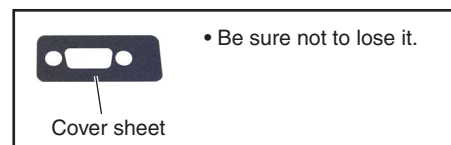
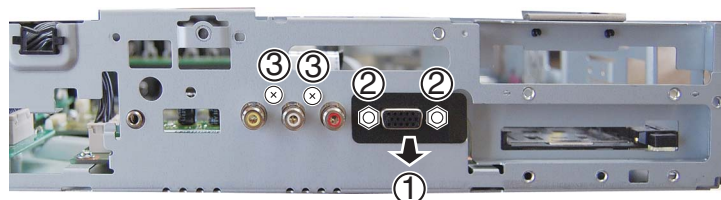
● Center frame

- ① Disconnect the two connectors.
- ② Remove the three screws. (ABA1383)
- ③ Remove the center frame.

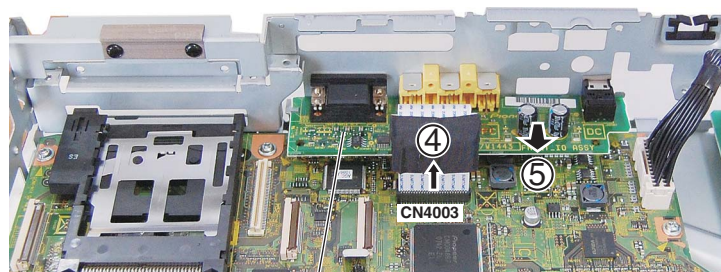


● FRONT IO Assy

- ① Remove the cover sheet.
- ② Remove the two hexagon headed screws. (ABA1382)
- ③ Remove the two screws. (BPZ30P080FTB)



- ④ Disconnect the one flexible cable.
- ⑤ Remove the FRONT IO Assy.



FRONT IO Assy

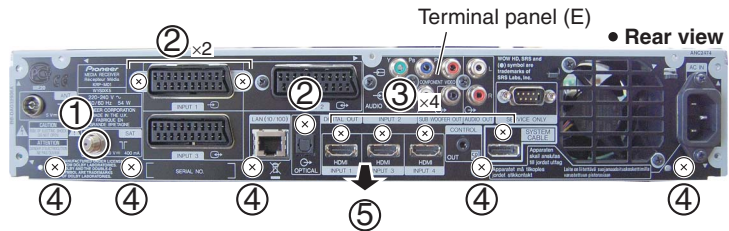


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7 MAIN BLOCK Assy

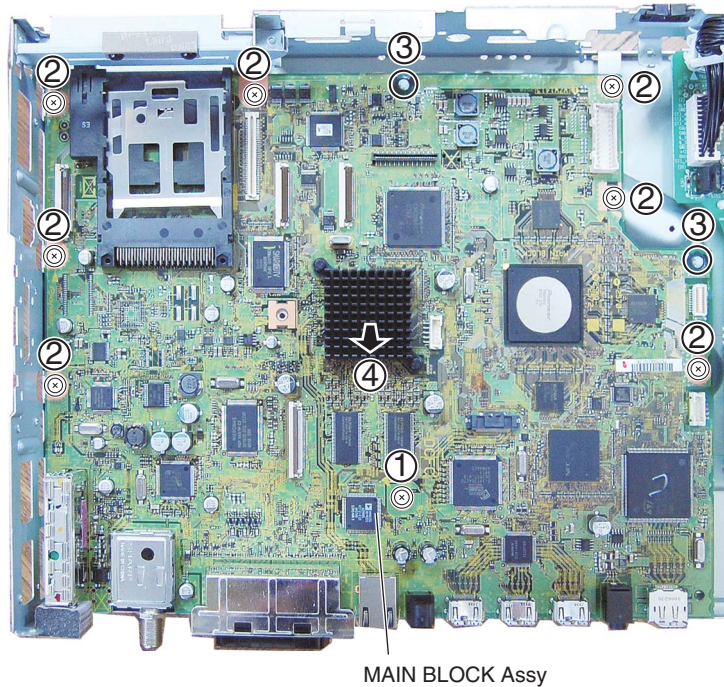
● Terminal panel (E)

- ① Remove the one nut. (BBN1005)
- ② Remove the three screws. (BPZ30P080FTB)
- ③ Remove the four screws. (BMZ30P060FTB)
- ④ Remove the five screws. (BBZ30P060FTB)
- ⑤ Remove the terminal panel (E).



● MAIN BLOCK Assy

- ① Remove the one screw. (AMZ30P060FTB)
- ② Remove the seven screws. (ABA1383)
- ③ Remove the two circuit board spacers.
- ④ Remove the MAIN BLOCK Assy.



8. EACH SETTING AND ADJUSTMENT



1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
MAIN BLOCK Assy (*)	➡	Execute section [5-5] AUTO ADJUSTMENT of 6.2 [5] INITIALIZE.
Other assemblies	➡	No adjustment required

(*) : When replacing the MAIN BLOCK Assy, be sure to perform the FINAL SETUP.

■ Replacement of the whole Assy is required when one of the following part on the corresponding Assy is in failure

PCB Assy No.	Assy Name	Ref No.	Function Name	Part No.	Reason
AXY1204	POWER SUPPLY Unit	U0003	—	—	The maker forbids Pioneer from repairing the Assy.
AWV2570 AWV2572	MAIN BLOCK Assy	IC6403	DTV Flash	S29GL512P10TFIR1-K (AGC1089)	Because ID data (MAC address and data on keys) have been stored
		IC6001	SYSTEM IC (BCM7404)	BCM7404XKPB11G-K	Because adjustments and data writing at the level of production line are required after replacement
		IC5002	HDCP EEPROM	BR24L02FV-W	
		IC5003	HDCP EEPROM	BR24L02FV-W	
		IC5004	HDCP EEPROM	BR24L02FV-W	
		IC7301	FRONT HDCP EEPROM	BR24L02FV-W	
		IC7004	EMMA2 EEPROM	BR24L64F-W	
		IC6701	ARIA FLASH	S29GL016A90TFIR2-K (AGC1088)	
		IC6811	IF UCOM	AGC1086	
		IC7202	EMMA2 FLASH	S29GL032N90TFIO4-K (AGC1087)	
		IC6201	BCM DDR SDRAM	HY5DU121622DTP-D43-K	
		IC6202	BCM DDR SDRAM	HY5DU121622DTP-D43-K	
		IC6203	BCM DDR SDRAM	HY5DU121622DTP-D43-K	
		IC6204	BCM DDR SDRAM	HY5DU121622DTP-D43-K	
AWV2571 (AWW1443)	FRONT_IO Assy	IC8501	PC EEPROM	BR24L01AFJ-W	Because adjustments and data writing at the level of production line are required after replacement

A

Part whose replacement is difficult

PCB Assy No.	Assy Name	Ref No.	Function Name	Part No.	Reason
AWV2570 AWV2572	MAIN BLOCK Assy	IC7003	SYSTEM IC (EMMA2)	UPD61123F1-100KA3A-K	Because these ICs are packaged in BGA
		IC6501	ASIC (ARIA)	PD6568A-K	
		IC6702	DDR SDRAM (ARIA)	EDD1232ABBH-5C-E-K	
		IC6703	DDR SDRAM (ARIA)	EDD1232ABBH-5C-E-K	
		IC6704	DDR SDRAM (ARIA)	EDD1232ABBH-5C-E-K	
		IC4801	ADC	AD9985KSTZ	Because these ICs require readjustment after replacement
		IC5101	AV SW	R2S11006FT	
		IC5501	RGB SW	R2S11001FT	
		IC4702	VDEC	CM0048BF	
		U5301	DVB-T	AXF1191	Because the part has many pins (from G9, through-hole print will be adopted)
		U5201	DVB-S2	AXF1195	
		JA5601	CI connector	AKP1341	Because the part has many pins
		JA7502	Scart connector	AKP1265	
		JA8801	Scart connector	AKP1266	
		IC4901	HDMI	SII9135CTU-K	Because a radiation pad is provided
		IC5201	S2 demodulation IC	STV-0903	
		IC4601	Regulator	LTC3407EMSE-2	
		IC4501	Regulator	BD8624EFV	
		IC4503	LNB Regulator	LNBH23PP-TBB	

B

C

D

E

F

Adjustment Procedures After a Part that Requires Readjustment is Replaced

Execute section "[5-5] AUTO ADJUST. <=>" of "6.2 [5] INITIALIZE."

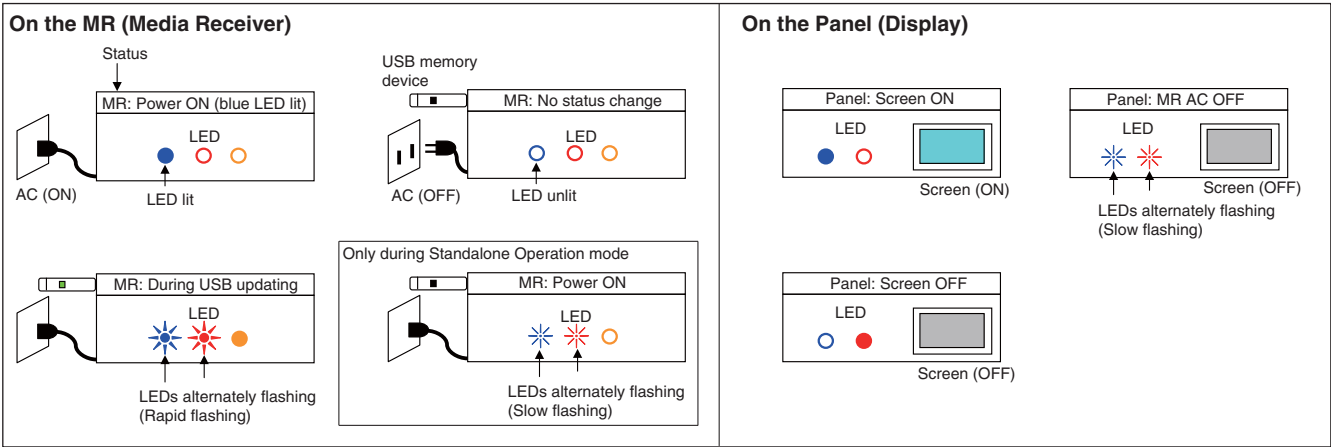
■ Preparation

Expand the image-file folder for USB updating in the root directory of the USB memory device.

Example: Folder construction after expansion in the root directory of the USB memory device

(With the nonencrypted folder)	[update] - boot.img - update.ctl - update.iso - update.lst	An encrypted image-file folder for USB updating will be released for general users.
(With the encrypted folder)	[update] - boot.img - update.ctl - update.enc - update.key - update.lst	

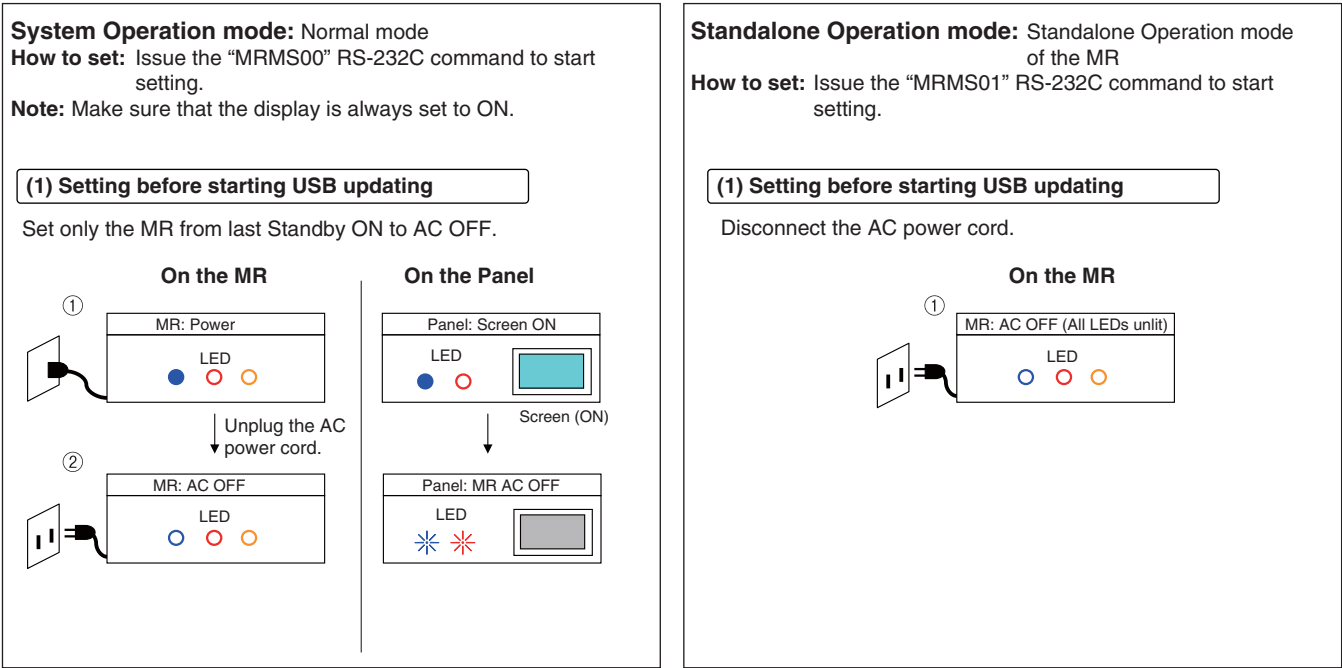
■ Description of the figures



■ Procedures

The methods for USB updating in System Operation mode and Standalone Operation mode of the MR are described below.

Note: Make sure that the display is always set in System Operation mode.

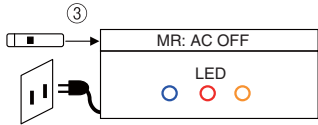


A

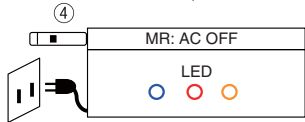
(2) Procedures for USB updating

Connect a USB memory device, then plug in the AC power cord.

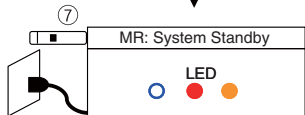
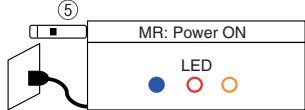
On the MR



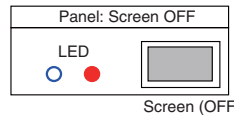
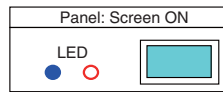
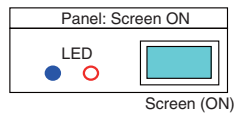
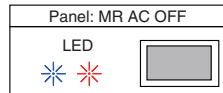
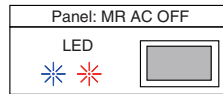
Connect a USB memory device.



Plug in the AC power cord.



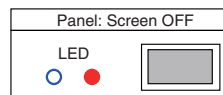
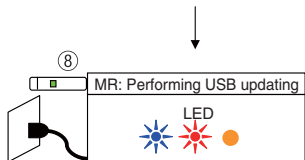
On the Panel



Note: If you interrupt the updating procedure in this step, updating is not started, and normal startup will begin.

NEVER use the remote control unit. (Especially DO NOT use the Power key.)

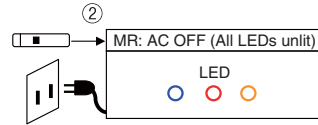
[If you use any key on the remote control unit in Steps ⑤ to ⑦]
If the unit does not shift to Step ⑧, disconnect the USB memory device then try the procedures from the beginning.
If the unit shifts to Step ⑧, continue the updating procedures as described.



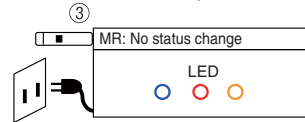
(2) Procedures for USB updating

Connect a USB memory device, then plug in the AC power cord.

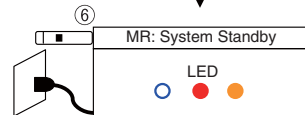
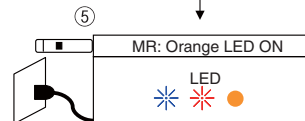
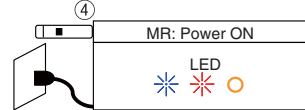
On the MR



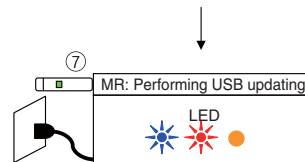
Connect a USB memory device.



Plug in the AC power cord.

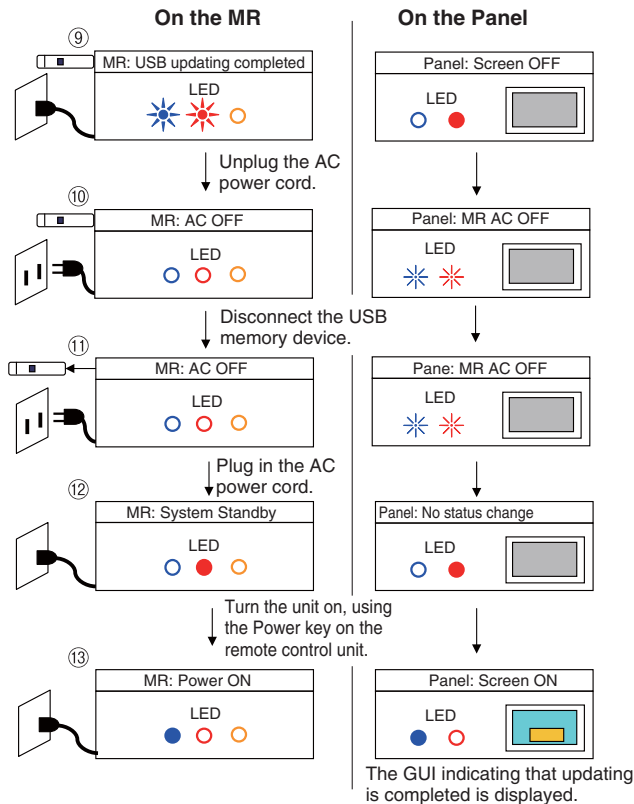


[If you use any key on the remote control unit in Steps ④ to ⑥]
If the unit does not shift to Step ⑦, disconnect the USB memory device then try the procedures from the beginning.
If the unit shifts to Step ⑦, continue the updating procedures as described.



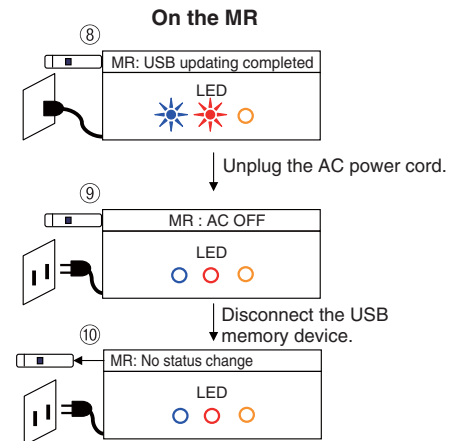
(3) Completion procedures for USB updating

After USB updating is completed, perform the following steps (unplug the AC power cord, disconnect the USB memory device, then plug the AC power cord back in).



(3) Completion procedures for USB updating

After USB updating is completed, perform the following steps (unplug the AC power cord, disconnect the USB memory device, then plug the AC power cord back in).



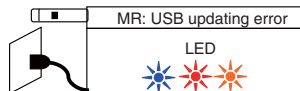
Return the MR to System Operation mode, by sending a command via the RS-232C connector.

How to set: Send the "MRMS00" command via the RS-232C connector.

In Standalone Operation mode of the MR, the GUI indicating that updating is completed is not displayed.

List of frequency of LED (orange) flashing when updating fails

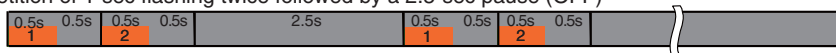
If updating is interrupted, the orange LED flashes to warn you of the error.



Frequency of Orange LED Flashing	Error Content	Details
1	(Not used)	
2	Version error	The same version or a newer version of software has already been loaded.
3	USB update startup error	Startup of USB updating failed.
4	DTV Update Error	Updating of the DTV software failed.
5	MAIN Download Error	Updating of the MAIN microcomputer software failed.
6	ARIA Download Error	Updating of the ASIC software in the previous stage failed.
7	ZEUS Download Error	Updating of the ASIC software in the later stage failed.
8	Module Download Error	Updating of the module microcomputer software failed.
9	IF Download Error	Updating of the IF microcomputer software failed.
10	USB disconnection	Abnormality in the USB memory device
11 to 13	Reserved	-
14	Destination error	The software for a different destination (Europe/North America/Australia) was used for updating.

Example: In a case where the orange LED flashes twice (version error)

Repetition of 1-sec flashing twice followed by a 2.5-sec pause (OFF)



Under the following conditions, USB updating procedures will be interrupted at Step 5 above, and normal startup will begin, but the LED does not flash for error indication.

Conditions under which the LED will not flash for error indication

- Any USB updating file is damaged
- Not all USB updating files are stored in the USB memory device
- The USB updating files are modified
- The USB memory device is defective

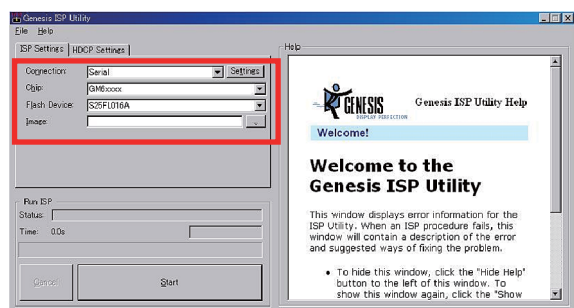
8.3 HOW TO UPDATE DISPLAY PORT FIRMWARE

1. Preparation of Tools

1. Activate the "ISPUtility xxxxxxxx.exe" file to install the ISP Utility.
On each screen, select "Next" until the installation wizard is finished.
 2. Activate the "CGProbe Redistributable xxxx.exe" file.
On each screen, select "Next" until the wizard is finished.
 3. Place the following files in the designated paths:
chip.xml
C:\Program Files\Genesis Microchip\ISP Utility\SAFELite-ISP_S25FL016A.hex
C:\Program Files\Genesis Microchip\ISP Utility\safe-lite
- Note:** If you changed the program installation path, the above-mentioned paths may be different.

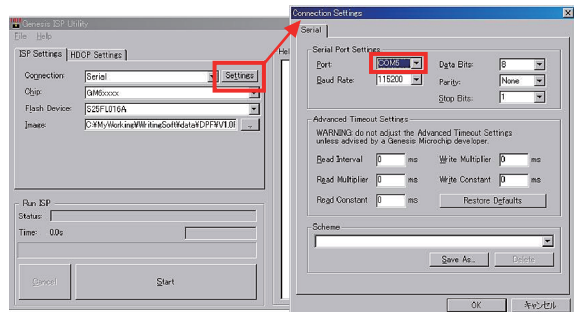
2. Updating

1. Connect the PC with the Media Receiver (MR) or Panel (Display), using an RS-232C straight cable.
2. Set the connected MR or Panel to Standby mode.
3. Disconnect the DP cable.
4. Start up the program for sending RS-232C commands:
Baud rate: 9600
COM port: Select, according to the environment of the PC.
5. Send the "UFW" command. Check that the red and blue LEDs flash.
6. Issue a command corresponding to the firmware to be updated.
[In a case where the DP firmware on the MR is updated]
Issue the "DPT" command.
[In a case where the DP firmware on the display is updated]
Issue the "DPR" command.
7. With the program for sending RS-232C commands, terminate the connection.
8. Start up the ISP Utility program and set up the ISP Settings screen.

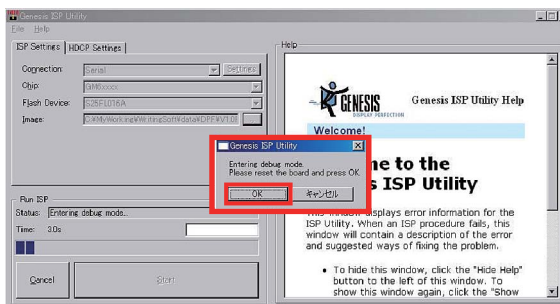


Connection: Serial
Chip: GM6xxxx
Flash Device: S25FL016A
Image: Select the ".hex" file to write to.

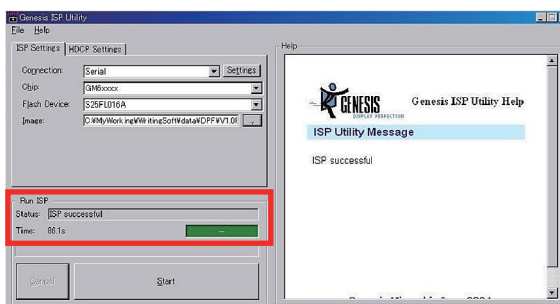
When "Serial" is selected in the "Connection" box, selection of Com ports is enabled. Click on "Settings" then select a Com port, according to the environment of the PC.



9. After all necessary settings are completed, click on Start to start updating.
10. When the following message is displayed, click on OK.

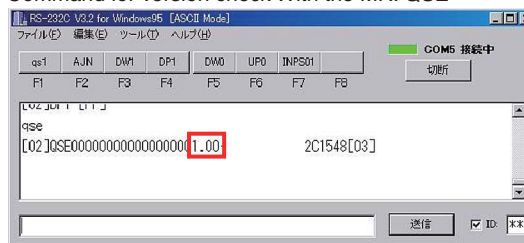


11. The current status is displayed in the "Status" box. When "ISP Successful" is displayed, updating is completed successfully.



12. Terminate the utility program and turn the MR or display off then back on again.
With the program for sending RS-232C commands, reestablish the connection. Then send the command for version check.

Command for version check With the MR: QSE



Command for version check with the display: QSB



13. Check that the version has been properly updated. This completes the updating procedures.

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KRP-M01

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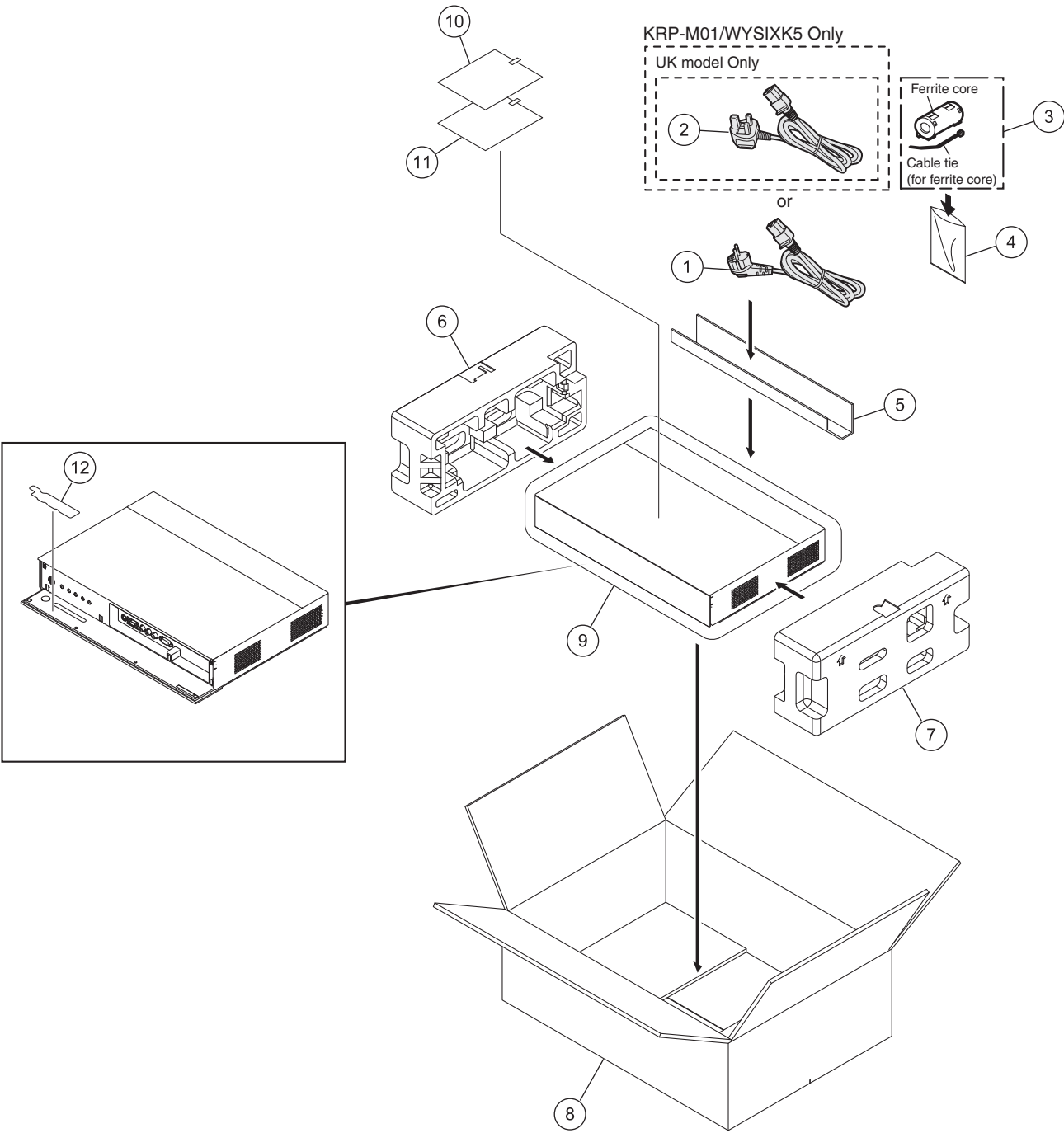
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9. EXPLODED VIEWS AND PARTS LIST

- NOTES:
- Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
 - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Screws adjacent to ▼ mark on product are used for disassembly.
 - For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

9.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

<u>Mark</u>	<u>No.</u>	<u>Description</u>	<u>Part No.</u>
⚠	1	Power Cable	ADG1214
⚠	2	Power Cable	See Contrast table (2)
⚠	3	Ferrite Core (L5208)	ATX1039
	4	Vinyl Bag	AHG1337
	5	ACC Carton	See Contrast table (2)
	6	Pad L	See Contrast table (2)
	7	Pad R	See Contrast table (2)
	8	Carton	See Contrast table (2)
	9	Mirror Mat	AHG1420
	10	Caution Card	See Contrast table (2)
	11	Film Caution Card	See Contrast table (2)
	12	Protect Film	GGP1121

(2) CONTRAST TABLE

KRP-M01/WYSIXK5 and WYSXJ5 are constructed the same except for the following:

<u>Mark</u>	<u>No.</u>	<u>Symbol and Description</u>	<u>KRP-M01/WYSIXK5</u>	<u>KRP-M01/WYSXJ5</u>
⚠	2	Power Cable	ADG1223	Not used
	5	ACC Carton (E)	AHD3677	Not used
	5	ACC Carton (G)	Not used	AHD3679
	6	Pad L (E)	AHA2735	Not used
	6	Pad L (G)	Not used	AHA2739
	7	Pad R (E)	AHA2736	Not used
	7	Pad R (G)	Not used	AHA2740
	8	Carton (E)	AHD3674	AHD3725
	10	Caution Card	ARM1439	ARM1440
	11	Film Caution Card	ARM1448	ARM1449

9.2 EXTERIOR SECTION

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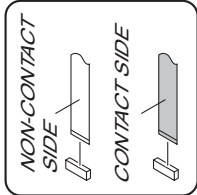
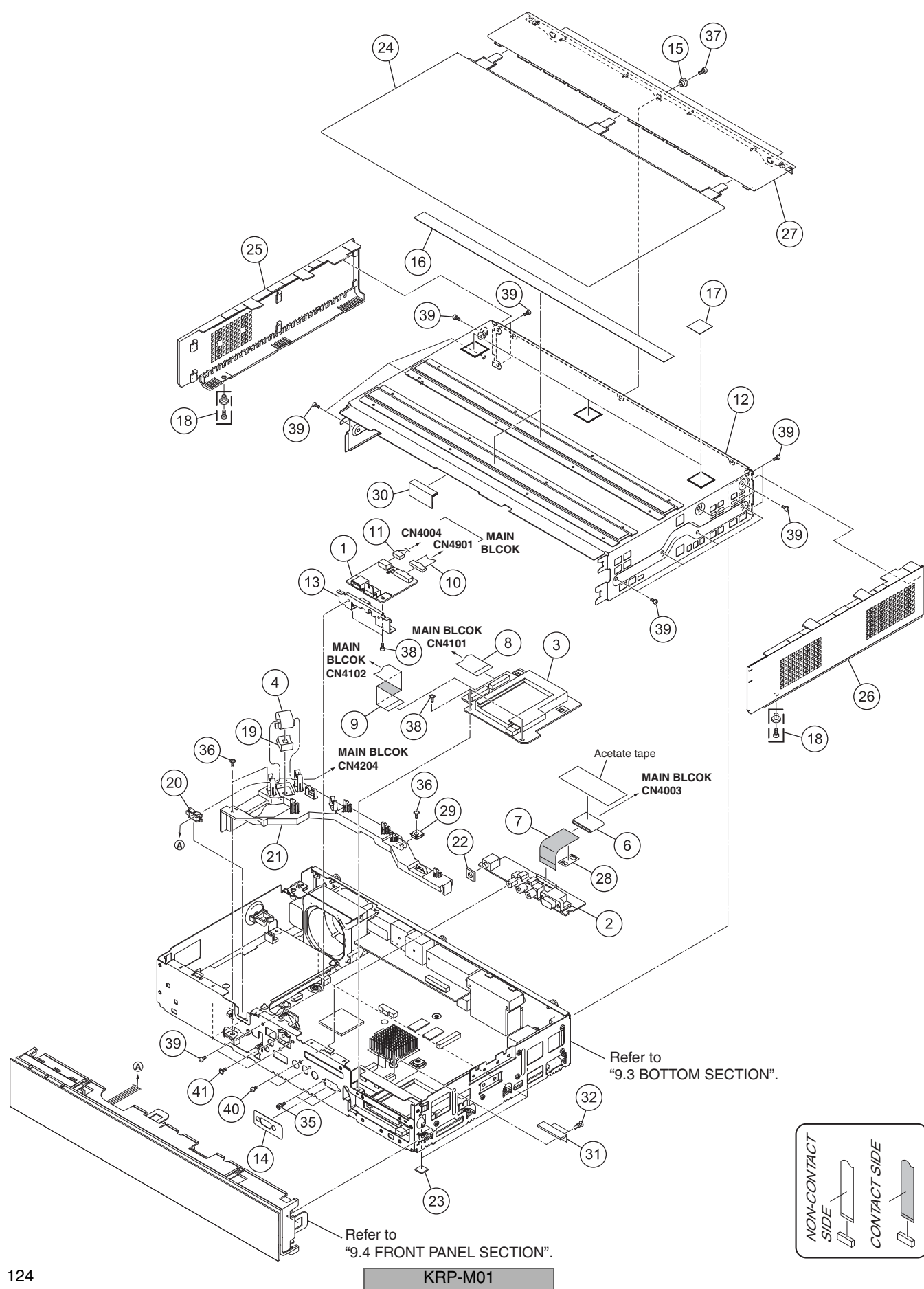
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(1) EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	FRONT_HDM_USB Assy	AWW1412	21	Center Frame	AMR3844
2	FRONT IO Assy	AWW1443	⚠ 22	Gasket HP	ANK1994
3	CI CARD Assy	AWW1444	23	Rubber Foot	VEB1349
⚠ 4	Ferrite Core (F1001)	ATX1034	24	Top Panel F	AAK2940
5	•••••		25	Side Panel L	AAK2941
⚠ 6	Ferrite Core (F1)	ATX1073	26	Side Panel R	AAK2942
7	Flexible Cable (J201)	ADD1564	27	Top Panel R	AAK2946
8	Flexible Cable (J204)	ADD1566	28	Ferrite Stopper	AEC1981
9	Flexible Cable (J205)	ADD1567	⚠ 29	Earth Plate MAIN	ANG3219
10	30P Shield FFC (J101)	ADF1042	⚠ 30	Gasket UP2	ANK1999
11	USB Cable (J102)	ADX3713	⚠ 31	Gasket CI	ANK1996
12	Upper Chassis Assy	See Contrast table (2)	32	Rivet A	BEC1158
13	PCB Holder	See Contrast table (2)	33	•••••	
14	Cover Sheet	AAK2850	34	•••••	
15	Collar	ABN1095	35	Hexagon Headed Screw	ABA1382
16	Upper Cushion	AEB1504	36	Screw	ABA1383
17	Top Cushion	AEB1505	37	Screw	ABA1391
18	Scrivet	AEC1657	38	Screw	ABZ30P060FTC
19	Ferrite Core Holder	AEC1818	39	Screw	BBZ30P060FTB
20	Edge Saddle	AEC1946	40	Screw	BPZ30P080FTB
			41	Screw (FE)	VBA1088

(2) CONTRAST TABLE

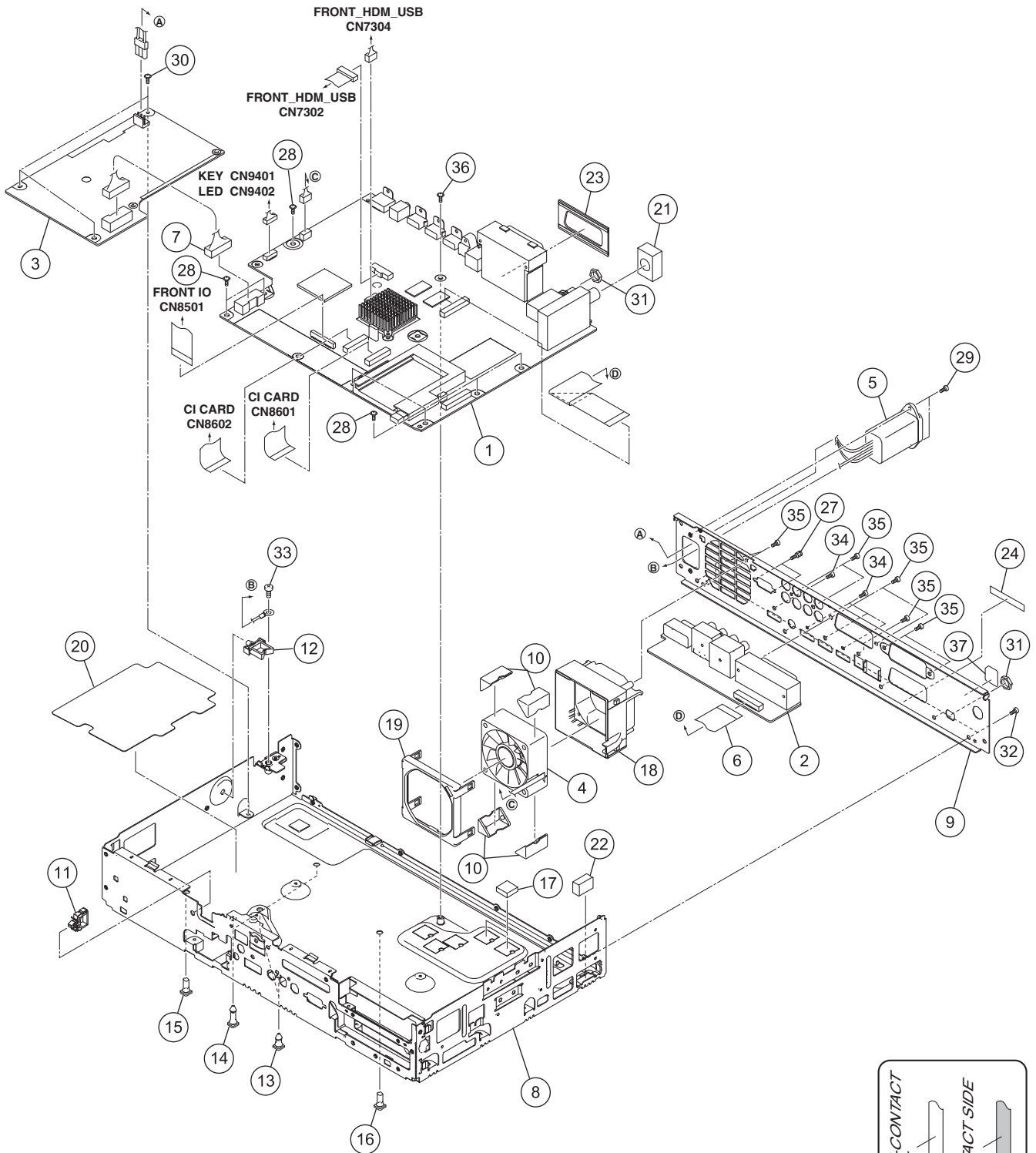
KRP-M01/WYSIXK5 and WYSXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	KRP-M01/WYSIXK5	KRP-M01/WYSXJ5
	12	Upper Chassis Assy	ANA2187	ANA2224
	13	PCB Holder	ANG3186	ANG3217

9.3 BOTTOM SECTION



Cleaning paper :
GED-008



(1) BOTTOM SECTION PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	MAIN BLOCK Assy	AWW1413	⚠	21	Gasket EU	ANK1972
	2	REAR IO Assy	AWW1441		22	Gasket MA	ANK1985
⚠	3	POWER SUPPLY Unit	AXY1204	⚠	23	Gasket SC	ANK1989
⚠	4	DC FAN Motor 60 x 25L	AXM1068	NSP	24	Serial Label	ARW1100
⚠	5	AC Inlet (CN1)	AKP1339		25	•••••	
	6	Flexible Cable (J203)	ADD1565		26	•••••	
	7	26P Housing Wire (J111)	ADX3674		27	Hexagon Headed Screw	ABA1382
	8	Base Chassis Assy	See Contrast table (2)		28	Screw	ABA1383
	9	Terminal Panel (E)	See Contrast table (2)		29	Screw	ABZ30P080FTB
	10	Floating Rubber 60	AEB1410		30	Screw	BBB30P080FSN
	11	Reuse Clamp	AEC2129		31	Washer Faced Nut	BBN1005
	12	Reuse Wire Saddle	AEC2134		32	Screw	BBZ30P060FTB
	13	Circuit Board Spacer	AEC2150		33	Screw	BMP40P080FSN
	14	Circuit Board Spacer	AEC2151		34	Screw	BMZ30P060FTB
	15	Circuit Board Spacer	AEC2152		35	Screw	BPZ30P080FTB
	16	Circuit Board Spacer	AEC2163		36	Screw	AMZ30P060FTB
	17	Silicon Sheet	AEH1182	NSP	37	Gost-R Label	ARW1126
	18	FAN Holder 60 A	See Contrast table (2)				
	19	FAN Holder 60 B	See Contrast table (2)				
	20	Insulation Sheet	AMR3891				

(2) CONTRAST TABLE

KRP-M01/WYSIXK5 and WYSXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	KRP-M01/WYSIXK5	KRP-M01/WYSXJ5
	8	Base Chassis Assy	ANA2186	ANA2225
	9	Terminal Panel (E)	ANC2474	ANC2480
	18	FAN Holder 60 A	AMR3845	AMR3918
	19	FAN Holder 60 B	AMR3846	AMR3919

1 2 3 4

9.4 FRONT PANEL SECTION

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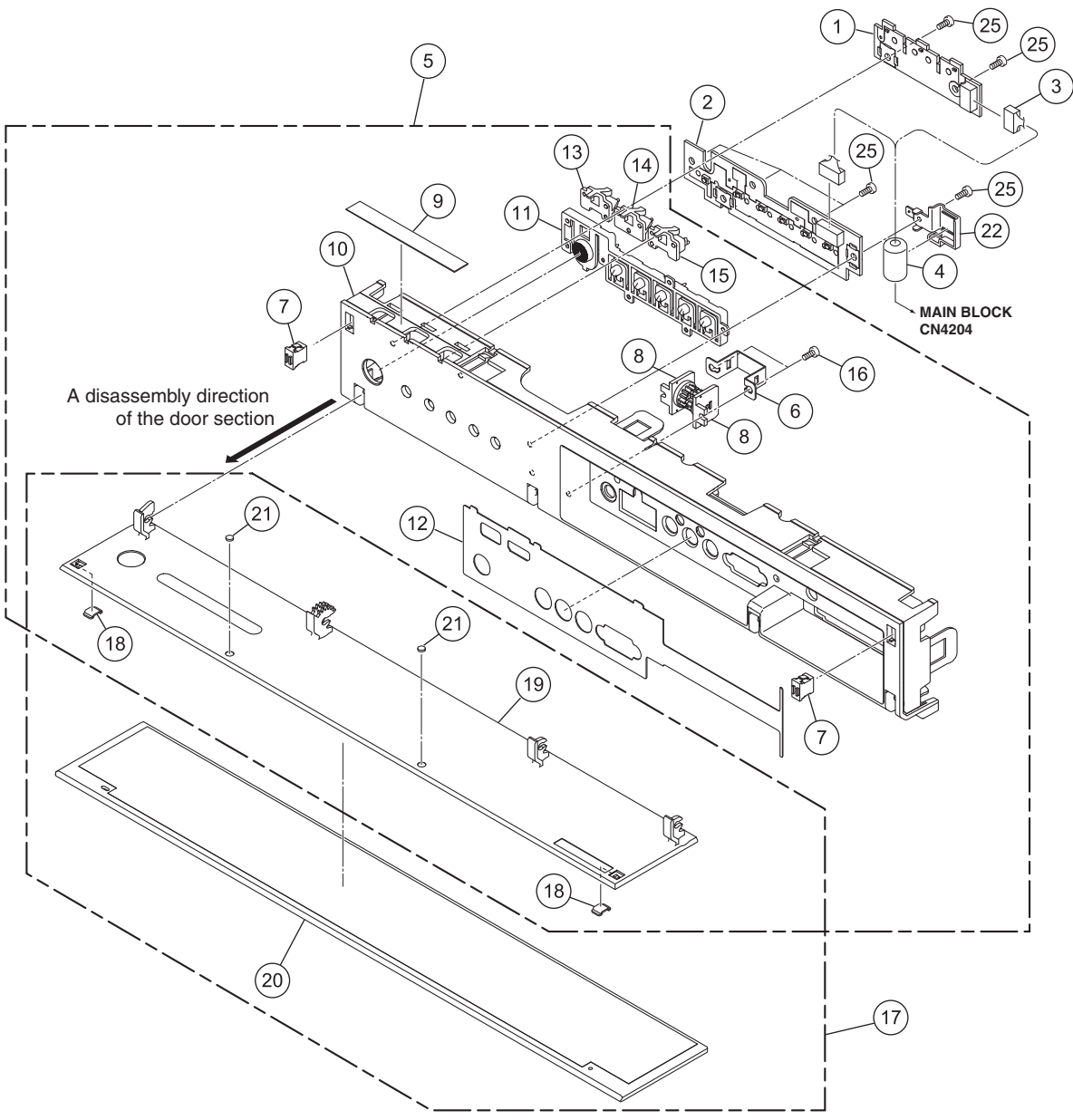
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■ When Replacing the F PANEL Assy (E)

When replacing the F PANEL Assy (E), discard the following parts of the new Assy kit for service and use the parts from the original door panel:

No.18	Door catcher
No.19	Door base
No.21	Door cushion

B

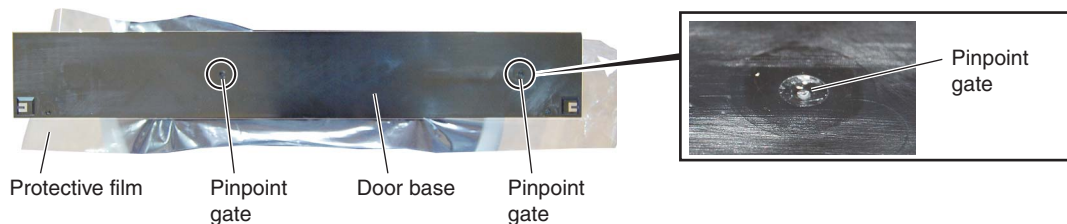
■ Reassembly Procedures for the Door Panel Service Kit

• Component parts of the GXX1283 Door Panel Service Kit

No.18	Door catcher (x2)
No.19	Door base (x1)
No.20	Door panel (x1)
No.21	Door cushion (x2)

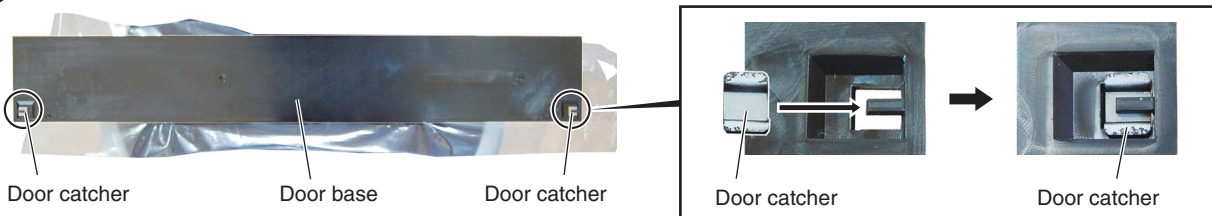
C

- ① Check that two marks of pinpoint gates do not protrude from the surface of the door base to which the door panel is to be attached.
Do NOT peel off the protective film of the door base in this step.
Peel it off after all the reassembly procedures are completed.



D

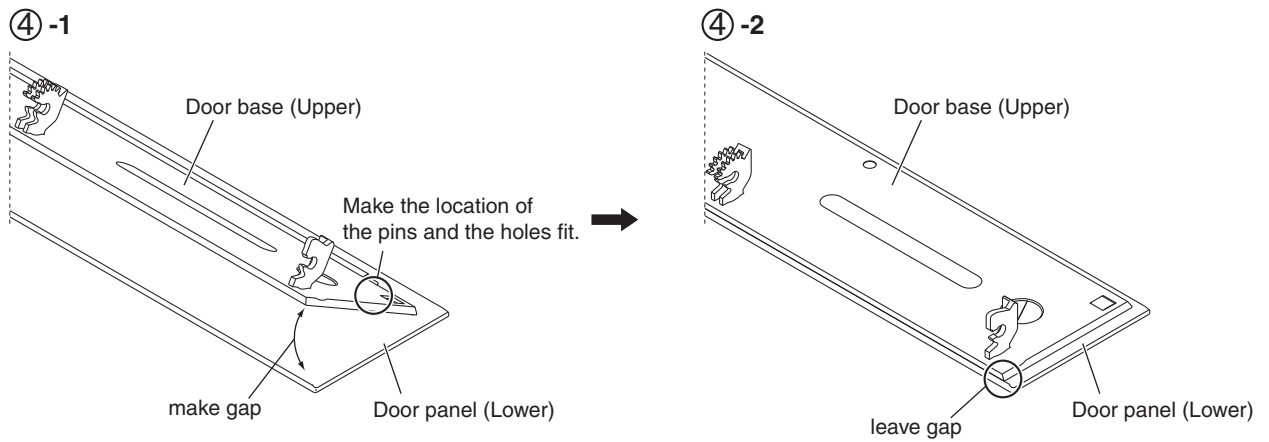
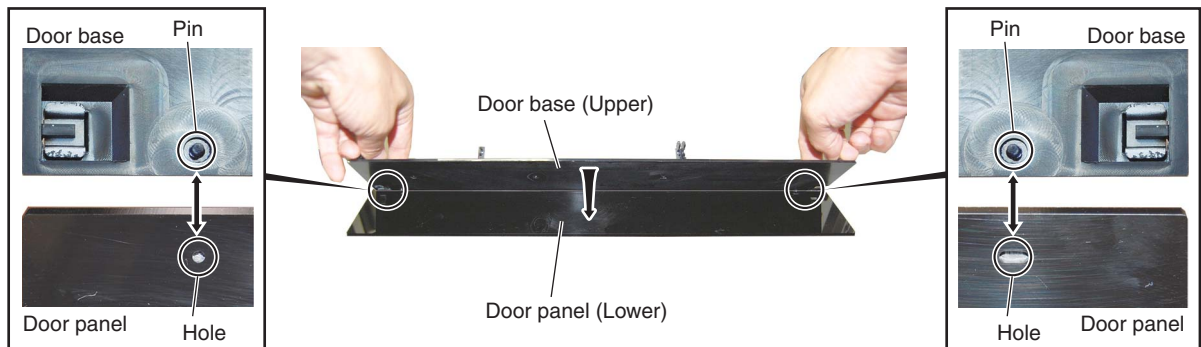
- ② Attach the two door catchers.



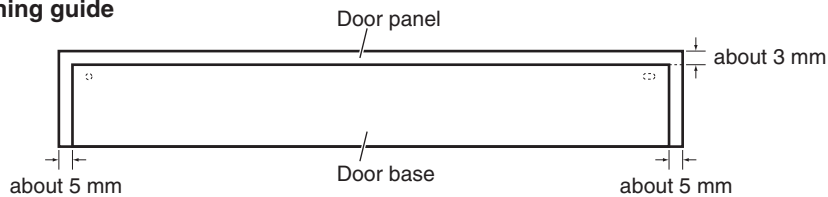
E

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- ④ Align the two positioning pins of the door base with the holes in the door panel.
When positioning, leave gaps between the door panel and door base, as shown in the figure below:



Positioning guide



- ⑤ Stick the door base and door panel together, by pressing them all over.
- ⑥ Attach the two door cushions.